ANMC Frostbite Protocol

Initial frostbite consult: ask location

Upper / Lower extremity → Orthopedics
Trunk → General Surgery
Face, Ears, Nose → ENT

Appropriate for outpatient referral?

YES
Make referral to appropriate clinic

NO
Transfer or Admit to ANMC
Initiate rapid rewarming
Orthopedics to evaluate for tPA candidacy

YES - tPA
- Frostbite to extremity
- Grade 3 or 4 frostbite injury
- Less than 24h since rewarming
- Able to give consent
Admit to CCU for Frostbite tPA Protocol

NO - tPA
- More than 24h since rewarming
- Recent trauma, stroke, or bleeding disorder
- Pregnancy
- Multiple freeze/thaw cycles
- Mental incapacity / Unable to assess mental status
Admit to floor for expectant management
ANMC Frostbite Protocol

Treatment in the Emergency Department:
- Rapid re-warming of the affected areas in warm water (between 37° and 39°C) for 20-40 minutes or until thawing complete.
- Administer warm IV fluids.
- Tetanus prophylaxis.
- Wound care performed or directed by appropriate consulting team:
  o Debridement of clear blisters.
  o Leave hemorrhagic blisters intact.
  o Apply aloe vera to blisters.
  o Dress lightly with padding to allow for ROM. Place gauze or kerlex in between digits to keep spaces dry.
- Pain management:
  o Rewarming and wound debridement is usually a painful process
  o Opioids PRN
  o Consider anesthesia consult for peripheral nerve block/catheter to affected extremity (may be performed post-rewarming; do NOT delay rewarming)
- Document pre- and post-warming images and scan into patient chart.

Inpatient conservative treatment protocol:
- Admission to surgical service (per location). Internal medicine available to consult if needed due to medical co-morbidities.
- Elevation of affected extremity
- PT/OT consults
- ROM exercises for affected digits
- NWB on affected areas. Recommend heel stryker shoes or post-op shoes for feet.
- Wound Care:
  o Topical aloe vera to blisters q6h with dressing changes.
  o Dress lightly with padding to allow for ROM. Place gauze or kerlex in between digits to keep spaces dry.
- Gabapentin 300mg TID standing
- Ibuprofen 400mg QID standing
- Vitamin C 500mg daily
- Vitamin E 400 IU daily
- Additional analgesia as needed (usually after 2 weeks there is no need for opioid pain medication)
  o Opioids PRN
  o Consider anesthesia consult for peripheral nerve block/catheter to affected extremity
- Smoking cessation as applicable
- Pentoxyfilline 400mg TID

Discharge planning:
- May discharge when wound care plan established and patient on oral pain medication.
  o Consider patient housing or medical shelter bed with return to clinic/ED for daily wound care as appropriate.
- Schedule follow-up with appropriate consulting service.