



AIM

To describe the features and treatment of cold related injuries.

Features

1. FROST NIP:

a. DEFINITION:

- i. Minor form of frost bite where skin becomes white & numb.

b. TREATMENT:

- i. Gradual re-warming; no rubbing of skin;
- ii. Skin should return to normal leaving short-term pain & hyperaemia.

2. FROST BITE:

a. DEFINITION:

- i. Localised cold injury where tissues freeze and ice crystals form between the cells causing tissue necrosis;
- ii. Commonly affects fingers, toes, nose & ears.

b. SYMPTOMS/SIGNS:

- i. Pain (often severe) in affected region followed by loss of sensation; skin appears pale/purple & feels cold; can be firm to touch;
- ii. Blistering followed by blackening & eventual separation of affected lesion leaving healthy tissue underneath.

c. MANAGEMENT:

- i. Protect from environment/further damage;
- ii. Do not attempt to re-warm until it can be sustained;
- iii. Strong analgesia.

3. HYPOTHERMIA:

a. DEFINITION:

Core temperature of less than 35 deg. Centigrade.

b. PREDISPOSING/EXACERBATING FACTORS:

- i. Made worse by wind & moisture (humidity/rain etc);
- ii. More common in extremes of age, inappropriate clothing, vomiting, trauma, stress, alcohol & coincident medical illness (e.g. diabetes mellitus, hypothyroidism).

c. MANAGEMENT:

- i. Prevent further heat loss (shelter from wind/rain & insulate underneath casualty);
- ii. Administer high flow oxygen;
- iii. Monitor pulse, BP & temp. Take a BM.
- iv. Remove & replace cold/wet clothing when safe to do so, including use of warm hat;
- v. Warm the patient where possible, including use of warm drinks if conscious (NO ALCOHOL);
- vi. Manage associated injuries, including pre-warmed fluids if possible
- vii. Keep flat whenever possible & handle with care to avoid precipitating VF
- viii. In cases of witnessed cardio-respiratory arrest:
 1. CPR should be continued until the patient recovers, reaches hospital and is handed over for continued care
 2. Follow normal CPR protocols
 3. Defibrillation is usually unsuccessful in presence of VF if core temp less than 30 deg. Centigrade. It should only be attempted once
 4. Adrenaline & other drugs should not be used until core temp. is above 30 deg. Centigrade
 5. Always check for hypoglycaemia
- ix. Consider transporting to hospital with an ITU which includes facilities for active re-warming;