Initial Management of Severe Burns

For burn injuries in adults >15% TBSA, elderly and children >10% TBSA or those that meet the LSEBN **Burn Referral Criteria**, consider early consultation with the **local Burn Service**

NHS
London and South East of England Burn Network

Assess the following points with respect to burn injury as part of standard ATLS protocol

AIRWAY

- ☐ Suspect inhalation injury:
  - ☑ respiratory distress (dyspnoea, stridor, wheeze)
  - ☑ voice changes
  - ☑ signs of upper airway oedema
  - ☑ deep facial burns
  - ☑ sooty sputum
  - ☑ history of burn in enclosed space
- ☐ Seek review by senior anaesthetist
- ☐ Consider need for early intubation (do not cut tube)
- ☐ Sit upright all patients with facial burns

BREATHING

- ☐ Suspect smoke inhalation injury if raised COHb level consider CyanoKit with reduced GCS, early lactate acidosis
- ☐ Administer 100% FiO_2 if carbon monoxide injury suspected
- ☐ Establish baseline ABG's and SaO_2 (goal >95%)
- ☐ Discuss with local Burn Service need for Escharotomy
  Considerations within circumferential full thickness injuries to neck/chest/torso with increased ventilation pressures or ventilation compliance.

CIRCULATION

- ☐ Insert 2 large bore peripheral IV lines in unburned skin, if able
- ☐ Take baseline bloods (U&E, FBC, LFT, CRP, Amylase, CK, X-Match, Drug/Tox)
- ☐ Discuss with **local Burn Service** need for escharotomy in circumferential burns to limb/digit:
  - ☑ Assess perfusion distal to burn
  - ☑ Elevate limbs

DISABILITY

- ☐ Assess pain score
- ☐ Administer IV opiate analgesia according to patient's needs

EXPOSURE

- ☐ **Remove:**
  - ☑ Hydrogel burn dressings
  - ☑ Loose clothing/jewellery/nappies proximal to burn injury. Leave any adherent clothing.
- ☐ **Cool:**
  - ☑ Wounds for 20 mins (with running water or wet compress if possible)
- ☐ **Clean:**
  - ☑ With Normal Saline or Tap H_20
- ☐ **Assess:**
  - ☑ Extent of burn (%TBSA) using Lund & Browder chart. Do not include erythema in %TBSA estimation.
  - ☑ Depth of burn
  - ☑ Send photos via TRIPS **www.trips.nhs.uk**
- ☐ **Cover:**
  - ☑ With loose longitudinal strips of Cling Film. Do not apply Cling Film to face.
  - ☑ Chemical injuries must be fully decontaminated
  - ☑ **Implement active warming measures to prevent heat loss**

FLUIDS

- ☐ Assess patient's weight
- ☐ Use Parkland formula to estimate fluid resuscitation requirements from time of injury:
  - ☑ 4mls/kg/% burn, half over the first 8 hrs, rest over next 16 hrs
  - ☑ Administer warmed Hartmann's
- ☐ Additional maintenance fluid may be appropriate and can be discussed with the accepting Burn Service
- ☐ Adjust formula if delay between time of injury & presentation
- ☐ Insert urinary catheter and titrate fluids to urine output:
  - ☑ Adults: 0.5 – 1ml/kg/hr
  - ☑ Children <30kgs: 1ml/kg/hr
  - ☑ Electrical: 1-2ml/kg/hr
- ☐ Maintain accurate fluid balance chart

OTHER

- ☐ Discuss with **local Burn Service**:
  - ☑ Tetanus status
  - ☑ Nasogastric tube
  - ☑ Antibiotics (routine prophylaxis not required)
  - ☑ Nil by mouth
  - ☑ Safeguarding concerns

REFER

- ☐ Complete LSEBN Burns Transfer Information and send via TRIPS to **local Burn Service**
- ☐ LSEBN guideline documents are available via TRIPS Help & Information on **www.trips.nhs.uk**
- ☐ Refer patient by calling the **local Burn Service**
- ☐ Make transfer arrangements. **Keep warm.** Sit head up.
- ☐ Telephone support and advice on care of any patient with a burn injury is available at all times

CONTACT DETAILS

www.trips.nhs.uk

St Andrews Burns Service
Broomfield Hospital (Chelmsford)
Adults/Children **01245 516037**

Chelsea & Westminster Hospital (London)
Adults **02033152500**
Children **02033153706**

Queen Victoria Hospital (East Grinstead)
Adults **01342 414440**
Children **01342 414469**

Stoke Mandeville Hospital (Aylesbury)
Adults and Children **01296 315040**

Adapted with permission from the Victorian Burn Service and Trauma Victoria

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