

## Trauma Scenario 5 Refresher Course

*This is a Teaching Scenario. Some flexibility in how it progresses is possible according to individual learner needs*

### History {initial candidate briefing prior to arrival of child}

A 6 year old boy was playing in the roof of a shed with his friend. They had some petrol and matches. Two hours before admission, he dropped a lighted match onto some of the spilled petrol which erupted into flames in his face. He ran screaming for the ladder and fell one storey. Hearing the screams, the farmer arrived finding the boy on the floor of the shed with his shirt on fire and writhing in pain. The farmer put out the flames with a blanket and called the ambulance who are now en route to your hospital.

Estimated weight 20 kg.

### Initial impression {provide information as candidate assesses child and applies monitoring}

On arrival he is in pain, crying and has mild stridor. He has burns with blisters and sloughed skin to the face, trunk and right arm. HR 135, BP 94/61, CRT 4 sec, RR 40, SpO<sub>2</sub> 95% in air, Temp 36.2. The ambulance officers report that he would not tolerate a cervical collar or face mask oxygen

### Clinical Course {to be given to candidate as they progress}

Early in the assessment, provide the comment that the face is becoming very swollen. Urgent intubation needs to be arranged for stridor and increasing work of breathing.

He complains of severe left sided abdominal pain.

Worsening perfusion from a ruptured spleen stabilises after two boluses of crystalloid/blood.

Burns fluid therapy needs to be considered.

## INSTRUCTORS INFORMATION

### Key Treatment Points



<C>	Assess for and control external bleeding	
<b>Airway &amp; C-spine</b>	Establish airway patency	
	Protect cervical spine	
	High flow O <sub>2</sub> via face mask commenced early Titrate O <sub>2</sub> therapy to SpO <sub>2</sub> 94-98% when stable	
<b>Breathing</b>	Arrange for urgent intubation and ventilation	
<b>Circulation</b>	Early IV / IO access	
	Blood for X-match, COHb, etc.	
	Fluid boluses 10 mls/kg x 2 of warmed crystalloid or blood	
<b>General Therapy</b>	Initial analgesia. Ongoing sedation after intubation	
	ICU/Retrieval, Gen surg & Burns service consultation	
	Trauma imaging	

**Diagnosis:** Compromised airway, 30%, partial and full thickness burns to face, trunk and upper limbs. Circumferential burn to right arm. Ruptured spleen.

### **Learning objectives**

At the end of this session participants should be able to:

- Apply the structured approach to assessment, management and diagnosis of burns and airway oedema
- Recall and apply the principles of airway management regarding airway oedema and obstruction due to burns injury
- Recall and apply the principles of acute management of severe burns

### **Potential issues to be discussed/instructor resources**

- Burns – acute management. Used with permission and endorsed by the Paediatric Improvement Collaborative  
[https://www.rch.org.au/clinicalguide/guideline\\_index/burns/](https://www.rch.org.au/clinicalguide/guideline_index/burns/)
- Ensure debrief includes a discussion of burns dressings and ongoing fluids.
- Because oedema occurs following thermal injury, the airway can deteriorate rapidly.
- Thus even suspicion of airway compromise, or the discovery of injuries that might be expected to cause problems with the airway at a later stage, should lead to immediate consideration of tracheal intubation.
- All but the most experienced should seek expert help urgently, unless apnoea requires immediate intervention.

[APLS Manual 7<sup>th</sup> Ed Ch 13 pp 184]