APLS: Cardiac Scenario 3

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}

You are called to a surgical ward where a 6 year old post-operative patient has been found unresponsive and apnoeic. She had just returned from the recovery ward, having had manipulation and plaster of an ankle fracture under anaesthesia.
Estimated Weight 20kg.

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

A surgical registrar just arrived before you and has placed an LMA as bag valve mask ventilation was ineffective. They are ventilating the child through the LMA.
There is no visible rise and fall of the chest. No air entry. No pulse oximetry trace.
The child is unresponsive, apnoeic and pulseless. Asystole on ECG.

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

There is ROSC when effective bag mask ventilation with high flow oxygen is re-established, chest compressions performed, and adrenaline given.

INSTRUCTORS INFORMATION

Key Treatment Points

Airway & breathing	Remove LMA and establish airway patency
	BVM ventilation with 100% O_2
Circulation	Asystole protocol, Adrenaline 10 microg/kg IV/IO
	IV/IO access if not in situ
General Therapy	Uninterrupted BLS

Diagnosis: Opioid induced respiratory depression in ward. Cardiorespiratory arrest secondary to hypoxia complicated by LMA, obstructed airway.

Learning objectives

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

- Apply the structured approach to management and diagnosis during cardiac arrest
- Perform BLS/ALS effectively and safely
- Recall and apply the ALS asystole algorithm in their own practice
- Recall and apply the 4 Hs/Ts in their own practice

APLS: Cardiac Scenario 4

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}

You are working in an emergency department. The ambulance calls and tell you they are bringing in a 3 year old girl who has had bloody diarrhoea for the past 6 days. Her local doctor has been managing her. Today she has become very drowsy and the local doctor called the ambulance.
Estimated weight 15kg.

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

As the ambulance crew arrive at the hospital the girl suddenly becomes blue and unresponsive.

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

Initially the child is not breathing and has no pulse. ROSC after the third round of the VF protocol including administration of adrenaline and amiodarone.
If electrolytes are requested K is 9.8 mmol/L. BSL 4.3 mmol/L.
Seeking further advice or methods to treat hyperkalemia should then follow.

INSTRUCTORS INFORMATION

Key Treatment Points ☑

Airway & Breathing	Establish airway patency	
	BVM ventilation with 100% O_2	
	Consider LMA/intubation or arrange for intubation	
Circulation	VF protocol.	
	IV access, electrolytes and BSL	
	10 ml/kg fluid bolus	
Specific Therapy	Search for reversible cause of VF.	
	Treatment, advice for hyperkalemia.	

Diagnosis: VF arrest due to hyperkalemia caused by acute renal failure
(child has Haemolytic Uraemic Syndrome)

Learning objectives

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

- Apply the structured approach to management and diagnosis during cardiac arrest
- Perform BLS/ALS effectively and safely
- Recall and apply the VF/VT ALS algorithm in their own practice
- Recall and apply the 4 Hs/Ts in their own practice
- Recall and apply the acute management of severe hyperkalemia

Points for Discussion/Resources

Given history of diarrhoea a fluid bolus would be a desirable treatment between shocks.

APLS 7th Ed Hyperkalemia Management Algorithm