

APLS: Illness 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}

A 7 year old girl with asthma, is in transit by ambulance to emergency with a 2 day history of increasing cough and wheeze. Ambulance called to home because of severe breathing difficulties. They are giving nebulized salbutamol and oxygen in transit.
Guide Weight: 25 kg

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

Ambulance officers report little response to salbutamol. She is pale. Only able to say a few words. RR 40. HR 150. Tracheal Tug. Saturation 90% in oxygen on ambulance monitor.

Additional History & Observations

There is a history of multiple admissions to hospital as young child and infant. Has been not taking preventers for two years. Over the last two days she has been taking frequent doses of inhaled salbutamol. She is unable to find her spacer.

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

There is no improvement with a further dose of nebulised salbutamol and ipratropium. Oxygen saturations remain 91% in oxygen. Continuous nebulised salbutamol with two further doses of ipratropium. IVI MgSO₄, aminophylline or salbutamol and IV steroids are needed. Slow improvement.

Unless escalation of therapy with IVI MgSO₄, aminophylline or salbutamol then saturations worsen and bradycardia develops.

INSTRUCTORS INFORMATION

Key Treatment Points



Airway	Establish airway patency High flow O ₂ via face mask commenced early Titrate O ₂ therapy to SpO ₂ 94-98% when stable	
Breathing	Position child to enhance breathing	
Circulation	Intravenous access	
Specific Therapy	Nebulised Salbutamol IV steroids IV infusion MgSO ₄ , aminophylline or salbutamol.	

Diagnosis: Severe Acute on Chronic Asthma

Learning objectives

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

- Apply the structured approach to assessment, management, and diagnosis of severe asthma
- Recall and apply the principles of management of severe asthma in their own practice

Potential Issues to be Discussed

- Severity of asthma. History in assessing this.
- Oxygen saturations. Role of blood gases.
- Escalation of therapy.
- Intravenous therapy MgSO_4 , aminophylline or salbutamol.

Management of acute asthma. Used with permission and endorsed by the Paediatric Improvement Collaborative

https://www.rch.org.au/clinicalguide/guideline_index/asthma_acute/

APLS: Illness Scenario 4 Pacific

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 4 year old child has had a generalised tonic-clonic seizure (GTCS) at home. His mother has brought him to emergency as they live close to the hospital. On arrival he is not seizing and is responsive only to painful stimuli.

He has a past history of 48 hrs of fever, red truncal rash and confusion, and has been drowsy for the last two hours.

Estimated weight 15 kg.

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

As the candidate starts to assess the patient, he has a GTCS and then becomes hypoxic with resp depression requiring BVM ventilation. He is initially only responding to painful stimuli and then becomes unresponsive. Febrile 39.7°C.

Widespread maculopapular red rash on the trunk.

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

With airway opening and BVM ventilation O₂ sat and bradycardia improves. There is no response to two doses of benzodiazepine and the seizure continues.

BGL is 8.2 mmol/L. Plans to manage the airway should be discussed, including ensuring the presence of an experienced airway clinician. The seizure eventually stops with an infusion of IV levetiracetam or phenytoin.

INSTRUCTORS INFORMATION

Key Treatment Points



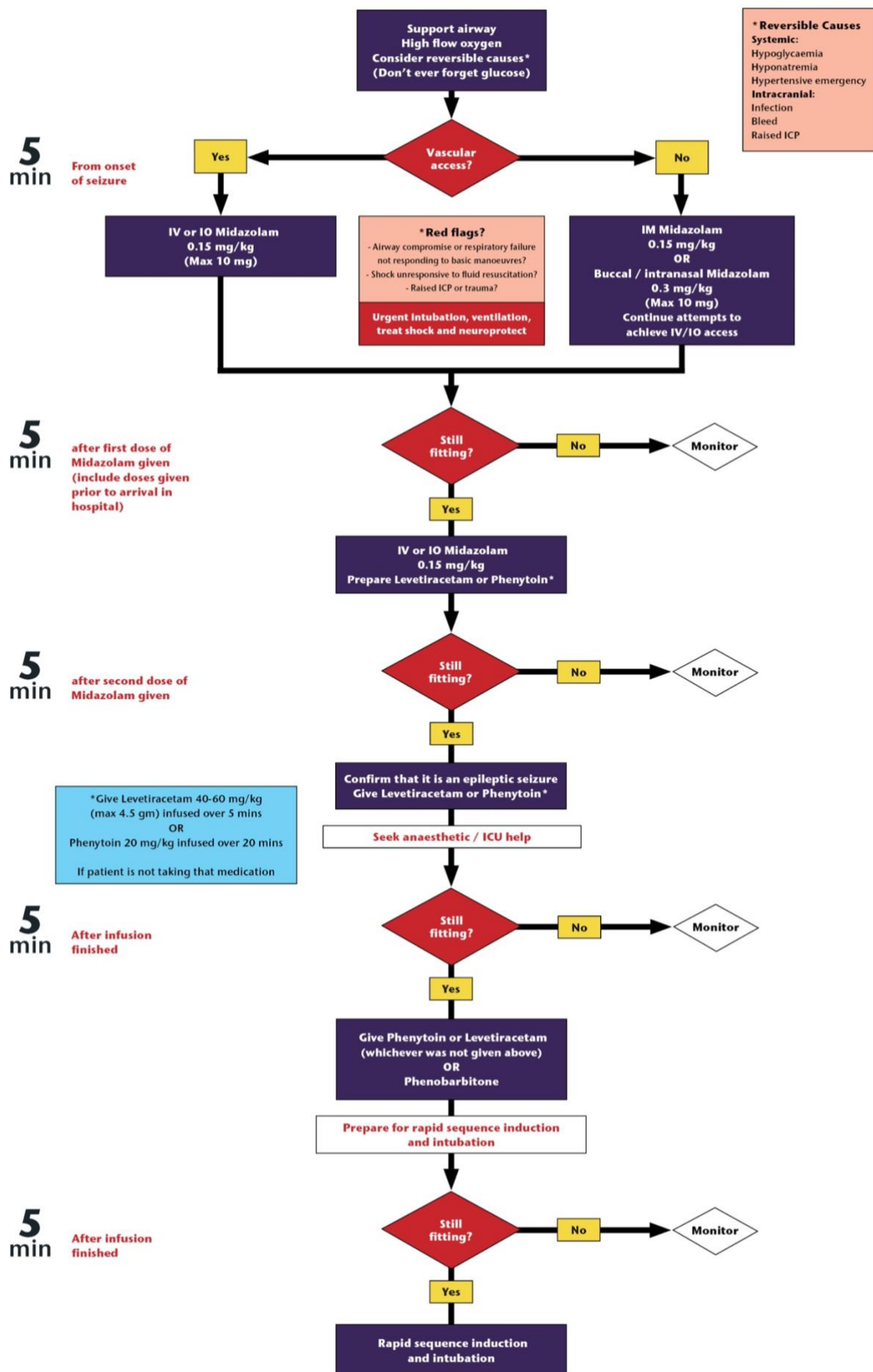
Airway	Establish airway patency High flow O ₂ via face mask commenced early Titrate O ₂ therapy to SpO ₂ 94-98% when stable Arrange for intubation or intubate	
Breathing	BVM ventilation with 100% O ₂	
Circulation	IV/IO access	
Specific Therapy	Status epilepticus protocol Blood sugar check	

Diagnosis: Prolonged Convulsion, Dengue encephalitis

Learning objectives

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

- Apply the structured approach to management and diagnosis during convulsive status epilepticus (CSE)
- Recall and classify the potential causes of CSE
- Recall and apply the APLS status epilepticus algorithm in their own practice including the application of locally available resources/drugs



Potential Issues to be Discussed/Resources

- [CPG Meningitis Encephalitis Paediatric Improvement Collective](#)

https://www.rch.org.au/clinicalguide/guideline_index/Meningitis_encephalitis/

- Discuss algorithm (a copy will be available): obtaining IV or IO access after 1st dose of IM/Intranasal/buccal midazolam (a copy of the algorithm will be available), role of levetiracetam. Local resources/drugs including use of diazepam
- Discuss seizures with a fever
- Acyclovir/antibiotics to cover encephalitis/meningitis
- RSI for intubation and seizures