

APLS: SIMULATION CASE I-4

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

A nine year old boy is brought into the Emergency department with shortness of breath. He is a known asthmatic with previous severe attacks. He has been in his bedroom playing on his gaming computer all day. When his mother went to call him for a meal, she found him struggling to breathe and unable to vocalise. The ambulance crew report that despite high flow oxygen and two salbutamol nebulisers in the ambulance his respirations are no better although he could nod and shake his head to questions.

Initial Impression *{to tell candidate as child arrives}*

Anxious expression, cannot speak, pink in high flow oxygen. RR 38bpm, shallow, severe recession/accessory muscle use. Chest auscultation poor air entry, percussion note equal both sides, trachea central, pulse 140 bpm, perfusion normal, systolic BP 110

Additional History and Observations Usual treatment: inhaled bronchodilator and inhaled steroids, montelukast. He has been in HDU several times with asthma. Saturation in high flow oxygen 90%

Clinical Course *{to be given to candidate as he/she progresses through the assessment and treatment of the child}*

Continuous nebulised salbutamol with ipratropium with oxygen, while setting up for an infusion, does not produce noticeable benefit after 15 minutes and he appears to be tiring. He gains some relief with an infusion of magnesium sulphate (or aminophylline) with an improvement in respiratory depth and decrease in rate. Saturation remains around 90% in oxygen. Guide weight 34 kg.

INSTRUCTORS INFORMATION

Key Treatment Points

Airway	Establish airway patency	<input checked="" type="checkbox"/>
Breathing	High flow oxygen – if flow lowered, saturation drops	
Circulation	IV-IO access	
Specific Therapy	Continuous salbutamol and intermittent ipratropium nebuliser	
	IV salbutamol and magnesium and/or aminophylline	
	IV hydrocortisone	
	IV Seek expert help early, HDU/PICU	

Diagnosis

Acute severe asthma - patient

POTENTIAL ISSUES THAT MAY BE RAISED

- role of chest x-ray
- role of additional medications: which IV infusion?