

STATUS ASTHMATICUS

MODULE: CRITICAL INCIDENTS

TARGET: ANAESTHETIC & ACCS TRAINEES

BACKGROUND:

Management of bronchospasm is a core skill common to the acute medical specialties. Management should include consideration of differential diagnoses and treatment should follow established British Thoracic Society guidelines. If airway protection is required then an anaesthetic technique which avoids further exacerbation of bronchospasm should be adopted, and appropriate ventilatory settings applied.

RELEVANT AREAS OF THE ANAESTHETIC CURRICULUM

IG_BS_07 AM_BS_04	Demonstrates effective pre-oxygenation, including correct use of the mask, head position and clear explanation to the patient
IG_BS_08	In respect of intravenous induction: <ul style="list-style-type: none"> • Makes necessary explanations to the patient • Demonstrates satisfactory practice in preparing drugs for the induction of anaesthesia • Demonstrates proper technique in injecting drugs at induction of anaesthesia Manages the cardiovascular and respiratory changes associated with induction of general anaesthesia
IG_BS_10 AM_BS_05	In respect of airway management: <ul style="list-style-type: none"> • Demonstrates optimal patient position for airway management • · Manages airway with mask and oral/nasopharyngeal airways • · Demonstrates hand ventilation with bag and mask • · Able to insert and confirm placement of a Laryngeal Mask Airway • · Demonstrates correct head positioning, direct laryngoscopy and successful nasal/oral intubation techniques and • confirms correct tracheal tube placement • · Demonstrates proper use of bougies · Demonstrates correct securing and protection of LMAs/tracheal tubes during movement, positioning and transfer
CI_BK_19	Bronchospasm
CI_BS_01	Demonstrates good non-technical skills such as: [effective communication, team-working, leadership, decision-making and maintenance of high situation awareness]
CI_BS_02	Demonstrates the ability to recognise early a deteriorating situation by careful monitoring
CI_BS_03	Demonstrates the ability to respond appropriately to each incident listed above
CI_BS_04	Shows how to initiate management of each incident listed above
CI_BS_05	Demonstrates ability to recognise when a crisis is occurring
CI_BS_06	Demonstrates how to obtain the attention of others and obtain appropriate help when a crisis is occurring
3.1	Manages the care of the critically ill patient with specific acute medical conditions

INFORMATION FOR FACULTY

LEARNING OBJECTIVES:

- Differential diagnosis of the patient with bronchospasm
- Assessing severity of asthma attack
- Management of status asthmaticus, including difficulties around invasive ventilation

SCENE INFORMATION:

- Location: Recovery

EQUIPMENT & CONSUMABLES

Manikin – on theatre trolley.
Oxygen mask
Nebuliser mask
Checked , disconnected anaesthetic machine
Stocked Airway trolley

- Laryngoscopes (2 x Macintosh)
- ET Tubes (Various Sizes)
- OP, NP and Advanced Supraglottic airways (iGels, LMAs)

Water's Circuit

PERSONS REQUIRED

Anaesthetic Junior Trainee
Recovery Nurse
Anaesthetic Senior Trainee

'VOICE OF MANIKIN' BRIEFING:

You have mild to moderate asthma usually, but are currently suffering a life-threatening asthma attack in recovery following a day case orthopaedic procedure.

You are reathless, wheezy, coughing and unable to speak in more than one or two word sentences. You deteriorates during the scenario to silent chest

Asthma usually well controlled with Clenil and Salbutamol inhalers. Animal hair and hay fever are triggers. You do not know usual Peak Flow measurements.
Last had oral steroids (Prednisolone) 2 years ago with a chest infection.
Never had nebulisers. No asthma related hospital admissions. Never been ventilated.
No other medications. No known drug allergies.

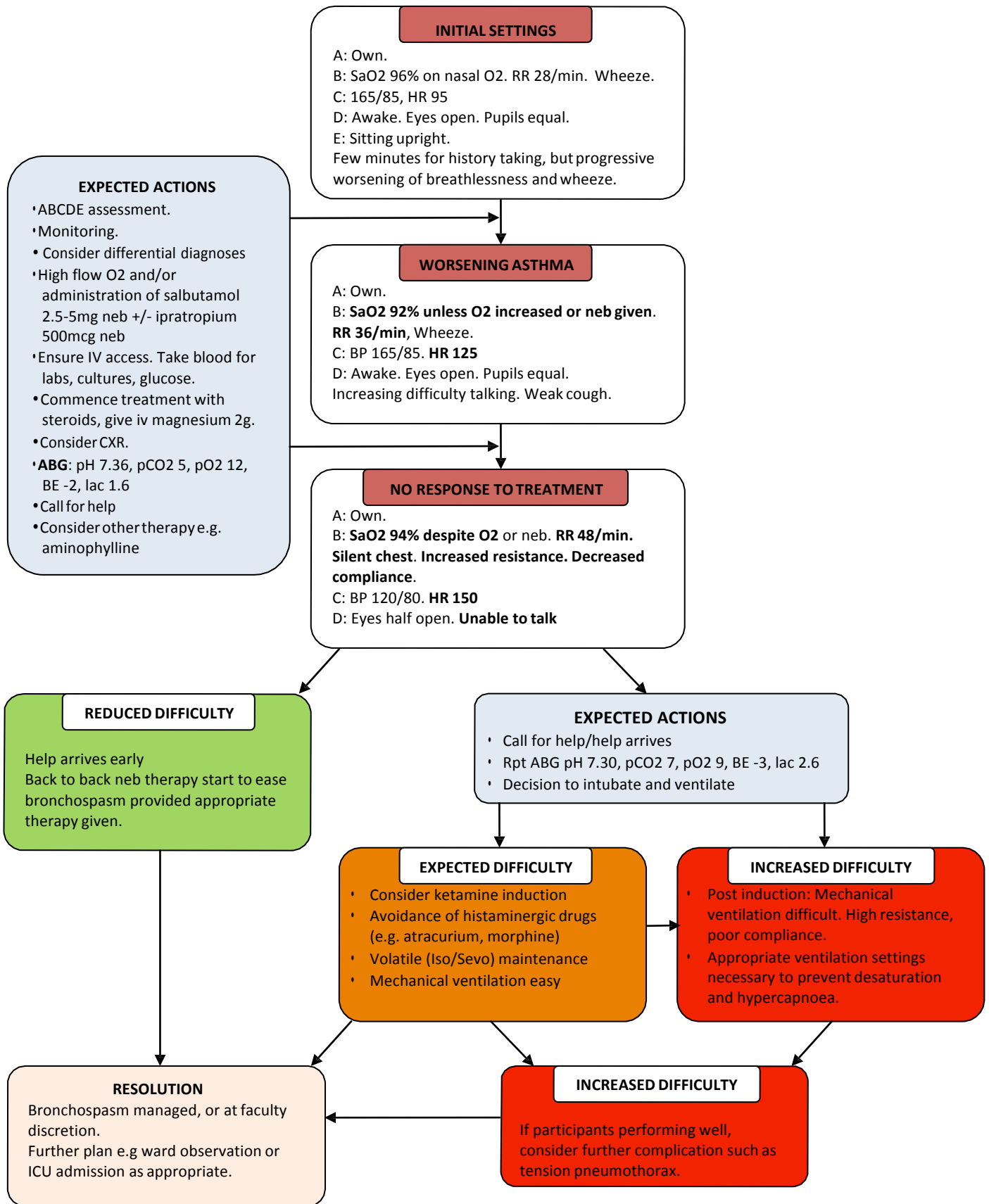
'RECOVERY NURSE' BRIEFING:

You have been looking after this patient for about 15mins. The LMA came out 10mins ago. Over the last 5 mins the patient has been complaining of chest tightness, and coughing a lot. They sound wheezy.

You know they are asthmatic from the anaesthetic chart, but have not got any asthma medications prescribed. You have called the doctor to review the patient.

You are able to administer nebulisers. If asked you have no anaesthetic skills beyond basic airway manoeuvres, holding a face mask or bag ventilation (2 person technique). You cannot connect up the anaesthetic machine.

CONDUCT OF SCENARIO



DEBRIEFING

POINTS FOR FURTHER DISCUSSION:

- Differential diagnosis of the patient with bronchospasm
- Assessing severity of asthma attack
- Management of status asthmaticus, including difficulties around invasive ventilation

DEBRIEFING RESOURCES

British Thoracic Society/SIGN Asthma Guideline 2011

Quick Reference Guide page 13-14 has the protocol for assessment and management of asthma exacerbations. Chapter 6 of the full guideline: Management of acute asthma has evidence based descriptions of each step in the management of an asthma exacerbation.

<http://www.brit-thoracic.org.uk/guidelines/asthma-guidelines.aspx>

Clinical Review: Mechanical Ventilation in Severe Asthma. Stather D, Stewart E. *Critical Care* 2005, **9**:581-587

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1414026/>

INFORMATION FOR PARTICIPANTS

KEY POINTS:

- Differential diagnosis of the patient with bronchospasm
- Assessing severity of asthma attack
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RELEVANCE TO AREAS OF THE ANAESTHETIC CURRICULUM

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PARTICIPANT REFLECTION:

What have you learnt from this experience? (Please try to list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?

PARTICIPANT FEEDBACK

Date of training session:.....

Profession and grade:.....

What role(s) did you play in the scenario? (Please tick)

Primary/Initial Participant	<input type="checkbox"/>
Secondary Participant (e.g. 'Call for Help' responder)	<input type="checkbox"/>
Other health care professional (e.g. nurse/ODP)	<input type="checkbox"/>
Other role (please specify):	<input type="checkbox"/>
Observer	<input type="checkbox"/>

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this scenario useful					
I understand more about the scenario subject					
I have more confidence to deal with this scenario					
The material covered was relevant to me					

Please write down one thing you have learned today, and that you will use in your clinical practice.

How could this scenario be improved for future participants?
 (This is especially important if you have ticked anything in the disagree/strongly disagree box)

FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM

What went particularly well during this scenario?

What did not go well, or as well as planned?

Why didn't it go well?

How could the scenario be improved for future participants?