



2015=9

Overview

Casey Paediatrics Teaching

Scenario 3 – Hugo Willams

Scenario Name: Hugo Williams– Asthma

### Format: Fully immersive scenario

### Course: Casey Emergency Paediatric teaching

### Last Revised: 10th November 2015

### File Location:

### Aim:

* To enable participants to practice an effective systematic approach to the management of a deteriorating Asthmatic.

### Duration of Session 10-15 minutes & debrief 10mins

### Type of Learners: Nursing and Medical staff

### Number of Learners: 10

### Number of Staff: 2-3

Learning Objectives:

1. Demonstrate a structured approach to a change in patient status
2. Recognise the need escalation of management
3. Demonstrate the correct use of MgSo4, Aminophylline, Ventolin nebs, steroid use
4. Demonstrate the correct application and use of BiPAP
5. Appropriate allocation of roles with multiple tasks needing to be performed
6. Demonstrate the ability to prioritise needs & call for help early
7. Practice effective communication when managing the unstable patient

# Plot

## Outline:

Hugo is a 6yo who is brought into emergency for exacerbation of asthma for the last 12 hours with increasing salbutamol requirements at home – he then deteriorates and requires escalating management – up to non-invasive.

## Patient Details:

### Patient Name: Hugo Williams

### Age: 6 years of age

Presenting Complaint:Hugo is a 6 yo child who presented to ED with exacerbation of asthma in setting of a viral URTI. Mother has been giving 2hourly Ventolin for the past 8 hours. He has just had his final 12 puffs of Salbutamol of his burst therapy.

### Past History:

* Asthma – triggers – URTI, seasonal – no previous ICU admissions, one hospitalisation a year or past 2 years
* Eczema
* NKA

# Setup

## Room & Equipment:

Sign on door: Resuscitation 1

Posters on wall: ISBAR, ACLS, MET criteria

Resus Trolley outside room

## Patient:

Mannequin as “Hugo”

* 2L NP
* Male wig
* Patient gown
* Covered with blankets
* Cardiac monitoring available
* Oxygen saturation monitoring
* Non-invasive BP monitoring
* Bi-pap availble

## Props:

* Triage nursing chart at end of bed with presenting problem completed as “SOB/wheeze – excacc Asthma”
* Bi-PAP mask - small +/- ventilator
* Intubation equipment checked and available
* 6 cm endotracheal tube (ETT)
* 20 ml syringe
* ETCO2 monitoring
* Lubricant
* McGill’s forceps
* Laryngoscope
* Size 3 McIntosh blades (light source checked and functioning)
* Tape to secure ETT
* Drugs available for rapid sequence intubation (RSI) and potential complications/side effects
* Suxamethonium 100mg in 2ml
* Ketamine 200mg in 2ml
* Propofol 200mg in 20ml
* Midazolam 5mg in 5ml, 5mg in 1ml, 15mg in 3ml, 50mg in 10ml
* Fentanyl 100 micrograms in 2ml, 500 micrograms in 10ml
* Rocuronium 50mg in 5ml, 100mg in 10ml
* Vecuronium 4mg or 10mg powder for reconstitution
* Metaraminol 10mg in 1ml
* Adrenaline 1mg in 1ml, 1mg in 10ml
* Atropine 1200 micrograms in 1ml, 600 micrograms in 1ml
* Crash Cart stocked with
  + Premixed Adrenaline infusion 6mg/100ml
  + Premixed Isoprenaline infusion

**Primary Participant:** Handover

# Conduct of Scenario

## Stem

“Hugo is a 6yo boy who has brought in by his mother for increasing SOB and wheeze despite 2 houlry Ventolin at home. He has just had his final 12puffs of salbutamol as part of his burst therapy – he had responded well to the initial 12 puffs.”

## Actors’ Instructions

Actors: Nurse confederate

Patient: see control room table

## console

**Control Room:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***System*** | **Patient** | ***Mannequin Settings*** | | | | ***Sam*** | **Ix Results** |
| General |  | Child sitting up speaking only in words | | | |  |  |
| Airway | Talking | Normal | | | | Airway Clear |  |
| Breathing | SOB | ***RR***  35/min | ***SaO2***  96% on 4L/min | ***Chest sounds:***  *Normal* | |  |  |
| *Evolution of patient state:*   * Maintain sats initially, decrease to 89 | | | |
| Circulation | A little dizzy | ***HR***  *135/min* | ***BP***  *120/70mmHg* | | ***ECG:*** | JVP – not elevated | Initial Venous Gases  pH 7.20  HCO3 20  pO2 85  Lactate 4.2  pCO2 50  BSL 5.6  K 4.5 |
| *Evolution of patient state:*  *Progression severe asthma*   * Increase RR to 50 and SaO2 to 87% * No longer able to speak * Silent chest * Tired   *Treatment of Severe/Critical asthma*   * Continue ventolin * IV access and commencing MgSO4, Methylpred, aminophyliine * With application of Bi-PAP –improving SaO2, and WOB | | | |
| Disability | GCS 14 |  | | | | Pupils - Normal  Motor responses - Normal | BSL 6.5 |
|  |  |  | | | |  |  |
|  |  | Scenario ends when patient referred to PIPERfor transport | | | |  |  |

**Discussion Points:**

* Initial management of Asthma.
* Use of MgSo4
* Ventolin toxicity – consideration of cutting back on ventolin
* Correct application of Bi-PAP and settings
* Troubleshooting settings and pre-empting complications
* Calling for help early
* Appropriate allocation of roles