SCENARIO

ANAPHYLAXIS

Scenario:

John is a 45yo male patient seen in ED with a right lower lobe pneumonia.
She is to be transferred to a private hospital under the care of her private physician. She has been admitted to SSU in the interim.
He has been prescribed Ceftriaxone and Azithromycin.
Prior to being transported from the main ED cubicle to SSU, 1 g of Ceftriaxone was administered and 500mg of Azithromycin infusion has been commenced which is still running.
The patient tells the nurse that he feels like he has a lump in his throat , he looks anxious, SOB and has evidence of utricaria.
The emergency buzzer is pressed and the participants arrive.

Facilitator #1:
Operates console and observes scenario

Facilitator #2
Observes scenario

Actors:

Grad Nurse 1: "I do not know what happened! He buzzed and complained the he has a lump in his throat and looks very short of breath. Also he has a rash. He was fine 5 minutes ago.
It is important that as soon other nurses +/-medical staff arrive junior nurse steps into the back ground. She is helpful when given direct instructions but does not show initiative. Also she cannot perform any tasks beyond her usual role.

Room Set Up

"MOCK SCENARIO" Sign on Door
nursing chart at end of bed with observations
medication chart

1 18G IV cannula insitu
Patient in hospital gown
Covered with two blankets

Oxygen saturation monitoring
Non invasive BP monitoring
Crash trolley
Defibrilator
Intubation equipment checked and available

- 7.5 cm endotracheal tube (ETT)
- 20 ml syringe
- introducer
- ETCO2 monitoring
- Lubricant
- McGill's forceps
- Laryngoscope
- Size 3 & 4 McIntosh blades (light source checked and functioning)
- Tape to secure ETT

Melker Emergency **Cricothyrotomy** Catheter Tray

Cricothyrotomy trainer available.

Drugs available :

1mg Adrenaline 1:1000
1mg Adrenaline 1:10000
1mg Adrenaline Minijet
Aramine 10mg
Hydrocortisone 100mg
Salbutamol 5mg nebules
Ranitidine 50mg
Claratyne 10mg
Prednisolone 25 mg
N/saline 500ml and 1 Lit

Learning objectives

1. Recognise anaphynaxis- life threatening emergency

2. Demonstrate :

   1ST LINE THERAPY:

   1. Airway and oxygenation
   2. Decontamination – cessation of the causative agent
   3. Adrenaline:
      - 300mcg IM 1:1000
        repeat every 5-10 min
        avoid SC- slower peak blood levels
        lateral thigh than deltoid – more effective in achieving peak blood levels
      - 100mcg (0.1mg) IV as a 1:100000 dilution over 5-10 min: place 0.1 mg adrenaline (0.1ml of 1:1000) in 10ml N/saline
      - If refractory to initial bolus commence adrenaline infusion:
        1mg adrenaline (1ml adrenaline 1:1000 dilution)in 500ml NS and run at rate 1-4mcg/min = 0.5-2ml/min) titrating to effect.

   4. NS 1-2 lit for hypotension

   2ND LINE THERAPY:

   1. Cortocosteriods
      Hydrocortisone 250mg IV
   2. Antihistamines
      H1 and H2 blockers
   3. Agents for allergic bronchospasm
      If wheeze:
      Salbutamol neb
      Ipratropium neb
      MgSO4 2g IV over 20-30 min

3. Leader
   - leader appointed – leader stands back and leads , if possible without being involved in active Management

- Once The ED doctor arrived he/she should resume the leader role.
- Note if it has been a leader before ED doctor arrives.
- What distinguishes them as a leader and how was the leadership passed from this person to the ED doctor
- In this case as the ED doctor may be the only person that has airway skills may have to do both. Aknowledge this and the inherit difficulties

4. Team work

    a. Communication
        - How do you deligate tasks effectively i.e. ask specific person to do specific task
        - How do you get their attention : call them by name , touch them , get eye contact
        - Closing the loop (leader ask person “A” to give adrenaline→ person “A” gives adrenaline-→ person “A” states 1mg adrenaline given)

    b. Roles:
        - Who is the leader- what made them the leader? Did they announce it? Verbal and non verbal communication (how they stand , what they say , what they are wearing etc)
        - Who is the scribe nurse
        - Who is who- do people introduce themselves and state their position when they arrive?

5. If time permits briefly discuss sedation / paralysis and induced hypothermia/ disposition

5. Distractors

Nil.

6. Control Instructions

Initial obs set up:
GCS 15
HR 120 BP 85/50 O2Sats 88%RA

Once patient is connected to the monitor : sinus Tachycardia

After administration of 300mcg adrenaline IM AND O2 → transient improvement in BP 100/60 O2sats 95% HR 130

After administration of 1L NS transient improvement of BP to 100/60

Relapse follows:
Patient has hoarse voice/ anxious
GCS 15
HR 120 BP 85/50 O2Sats 88%RA

After administration of 100mcg adrenaline over 5-10 min → transient improvement in BP 110/60 O2sats 96% HR 130

If time allows further relapse
GCS 15
HR 120 BP 85/50 O2Sats 88%RA
Participants to commence adrenaline infusion

IF TIME ALLOWS participants can practice with Melker Emergency **Cricothyrotomy**