Accidental Extubation

Set-up:	
Lines/access:	RIJ CVC & left radial arterial line
Infusions:	Sedatives, noradrenaline, 1L crystalloid at 100ml/hr
Airway:	ETT sitting supraglottically (tip must be sitting in laryngeal inlet, balloon above cords
Ventilator:	P-SIMV 15/10 FiO_2 0.3 Rate 16 breaths/min (needs hole in test lung to simulate leak)
Other:	Airway trolley 2L reservoir bag with hole in. Occluded with a clamp that can be removed to progress leak

Clinical Setting

I: You are the ICU registrar called by the nurse of the patient in bed 3
S: Nurse reports patient in what looks like atrial fibrillation
B: 76M morbidly obese patient, recently admitted with septic shock secondary to necrotising fasciitis
A: Low tidal volumes on ventilator and atrial fibrillation
R: Called for help

Potential Clinical Course

- Initially **A** ETT, **B** SpO_2 95% on FiO_2 0.3 PSIMV at 16bpm, low VTs, $ETCO_2$ 3.5kPa, quiet breath sounds bilaterally, **C** HR92bpm AF, BP 118/62, **D** Sedated
- Falling VTs, falling saturations, loss of $ETCO_2$ trace
- Examination reveals ETT sitting supraglotically
- Saturations continue to fall
- Remove ETT
- Proceed with attempted re-intubation – impossible intubation – proceeds down DAS algorithm
- Difficult but possible FM ventilation – only with 2 handed technique, repositioning and adjuncts
- Calls for help and hands over patient

The Faculty of Intensive Care Medicine

Info Sheet For Faculty

- Initial settings:
  - SpO_2 95% on FiO_2 0.3
  - $ETCO_2$ 3.5kPa
  - RR 16/min
  - Quiet breath sounds through both lung fields
  - HR82bpm AF
  - BP 118/62

- Progress to:
  - SpO_2 92% on FiO_2 0.3
  - $ETCO_2$ 2.5kPa
  - Quiet breath sounds throughout both lung fields
  - HR 90bpm AF
  - BP 111/57

- Progress to:
  - SpO_2 92%
  - Loss of $ETCO_2$ trace
  - Absent breath sounds
  - Increase HR to 115bpm AF
  - BP 102/48

- On induction of anaesthesia/NMBD:
  - SpO_2 90%
  - RR zero
  - Absent breath sounds
  - Reduce BP to 82/45
  - Increase HR to 128bpm
  - Further observations depend upon actions

Faculty Roles

Bedside Nurse 1:

- You are a CNS
- You are looking after a 76M with septic shock
- You have noticed the patient is in AF and want to know, from the registrar, if this is old or new?
- You have no other concerns except that the patient's tidal volumes are a little low, but you'd expect that with a morbidly obese patient, and have increased the respiratory rate accordingly
- You take direction well, and can perform tasks asked if you in a timely fashion, you just lack impetus
- If the candidate asks the patient has been a little restless requiring the odd bolus of propofol
- During the failed intubation process you repeatedly suggest trying to intubate the patient again.

Bedside Nurse 2:

- You are a new starter – you have never seen an airway emergency before
- You are quite startled when asked questions/given directions, requiring instructions to be repeated to you
- If the candidate names equipment using technical terms then you inform them that you don't know what that is eg bougie
- You are keen to help, but are unwilling to do anything beyond your skill set .

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