DISPLACED ETT IN PRONE POSITION

MODULE: AIRWAY

TARGET: ALL ANAESTHETISTS

BACKGROUND:

Prone positioning is essential for many operations, and has several anaesthetic challenges. This includes the prone airway, patient positioning and poor access to both the patient and the patient's anatomy. Managing anaesthetic emergencies is particularly difficult in this position due to both the physical limitations and the relative unfamiliarity.

RELEVANT AREAS OF THE ANAESTHETIC CURRICULUM

BASIC LEVEL TRAINING	
OR_BK_04	Recalls/explains the potential hazards associated with positioning [supine, lateral, prone, sitting]
OR_BK_05	Recalls/explains the problems associated with anaesthesia for surgery in prone and lateral positions

INTERMEDIATE TRAINING	
RC_IK_08	Describes the principles of managing cardiac arrest in the prone position
RC_BK_17	Recalls/describes the Adult and Paediatric ALS Algorithms
RC_BS_01	Uses ABCDE approach to diagnose and commence the management of respiratory and cardiac arrest in adults and children.
RC_BS_04	Demonstrates correct use of advanced airway techniques including: • Supraglottic devices, including but not limited to LMA, ProSeal, LMA Supreme, iGel • Tracheal intubation
RC_BS_05	Maintain ventilation using: • Expired air via pocket mask • Self-inflating bag via facemask or advanced airway • Mechanical ventilator
RC_BS_06	Performs external cardiac compressions
RC_BS_07	Monitor cardiac rhythm using defibrillator pads, paddles or ECG leads.

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INFORMATION FOR FACULTY

LEARNING OBJECTIVES:

- Assessment of airway difficulties in prone position
- Management of airway in prone position
- Management of cardiac arrest in prone position with ongoing surgery

SCENE INFORMATION:

- Location: Theatre

An ASA I patient is undergoing an elective L4/5 spinal decompression and is midway through surgery. The anaesthetic consultant has asked a junior to watch the patient while he goes for a break. The patient is intubated and has been turned prone onto a Montreal mattress (if available).

EQUIPMENT & CONSUMABLES

Manikin – On theatre trolley.
Prone, with reinforced size 8 ETT lightly taped so can be pulled out by stooge ODP.
Draped with surgery on lumbar spine ongoing.
Checked anaesthetic machine
Stocked crash trolley
Stocked airway trolley
Syringes, IV fluid, giving sets
Remifentanil TCI/Desflurane inhalational
Completed anaesthetic chart

PERSONS REQUIRED

Anaesthetic Junior Trainee
Anaesthetic Consultant (leaves scenario early)
Anaesthetic Assistant (will pull tube out)
Theatre staff
Orthopaedic surgeon
Cardiac arrest team (optional)

PARTICIPANT BRIEFING: (TO BE READ ALOUD TO PARTICIPANT)

Your consultant has asked you to watch his patient in theatre while he goes to have lunch. The patient is a 54 year old male, ASA I with no allergies. The operation is an L4/5 lumbar decompression. Anaesthesia is maintained with Remifentanil/Desflurane, with Atracurium used for intubation. A reinforced endotracheal tube (size 8) has been inserted (Grade I intubation) and the patient has been turned prone. The surgery is halfway completed. Antibiotics have been given. No other medications have been administered. The plan is for administration of anti-emetics and analgesia as the surgery comes to a close, but this will not be for at least another 30 minutes.

'VOICE OF MANIKIN' BRIEFING:

Anaesthetised. Silent.

'ANAESTHETIC ASSISTANT' BRIEFING:

The endotracheal tube will become dislodged and the participant should recognise this. They will try to rescue the airway. This may be achievable prone or the patient may need to be turned supine by bringing in the second trolley and summoning appropriate help. If the airway is not re-established swiftly, the patient may arrest, and require CPR.

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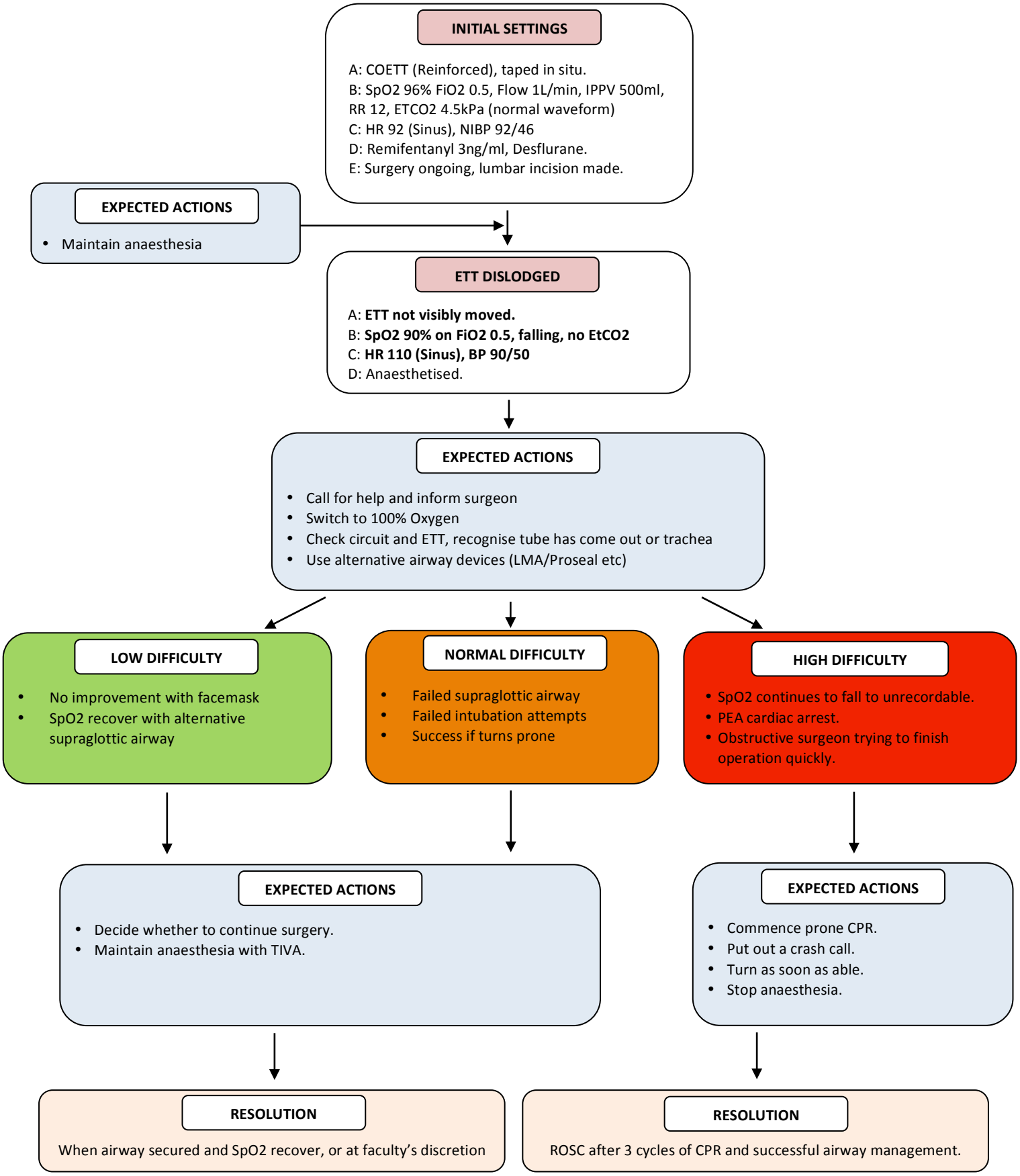
CONDUCT OF SCENARIO



DEBRIEFING

POINTS FOR FURTHER DISCUSSION:

Technical:

- Difficultly with prone position
- Securing airway when prone.
- Difficulty performing CPR in prone position.
- Rescue techniques for prone cardiac arrest.

Non-technical:

- Situation awareness
- Leadership
- Team working
- Communication during crises

DEBRIEFING RESOURCES

1. 2010 ALS Guidelines

2. CEACCP (2004) 4 (5): 160-163 “Patient Positioning in Anaesthesia”

3. FRCA “Tutorial of the Week 112: Prone Positioning”
   www.frca.co.uk

4. *“Reverse CPR: a pilot study of CPR in the Prone Position”* Resuscitation 2003 Jun;57(3):279-285

5. Anaesthesia News Nov 2013, pages 16-17 “Prone Position CPR” (S Phillips, F Lamb)

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INFORMATION FOR PARTICIPANTS

KEY POINTS:

- Prone anaesthesia maintained with Remifentanil TCI and Desflurane inhalational volatile.
- Airway management in prone position, particularly in the event of failure.
- Cardiac arrest in the prone position

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?

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PARTICIPANT FEEDBACK

Date of training session:.....

Profession and grade:.....

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

Primary/Initial Participant	
Secondary Participant (e.g. 'Call for Help' responder)	
Other health care professional (e.g. nurse/ODP)	
Other role (please specify):	
Observer	

	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)

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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?

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