

# **Station 3: Fibreoptic intubation via SGAD/ILMA**

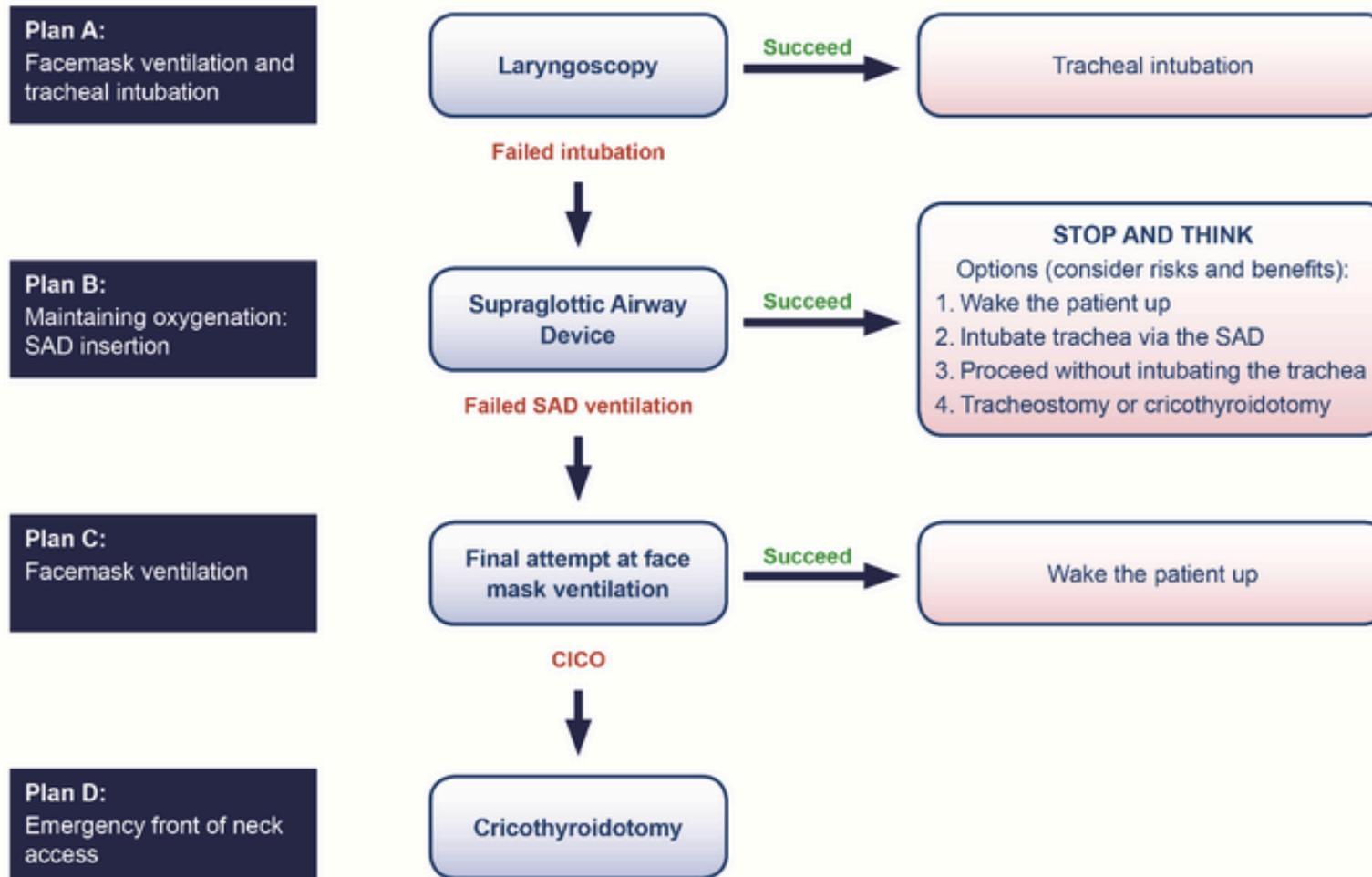
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# Objectives and learning points

- Part of Plan B DAS algorithm (secondary intubation plan)
- Fiberoptic assisted Intubation via SGA, 1 stage technique (ILMA)
- Fiberoptic assisted Intubation via SGA, 2 stage Aintree exchange catheter technique
- Size of ETTs the pass through LMAs/iGels

## DAS Difficult intubation guidelines – overview



# FIBROPTIC GUIDED TRACHEAL INTUBATION THROUGH SUPRAGLOTTIC AIRWAY DEVICE (SAD) USING AINTREE INTUBATION CATHETER

Please ensure the SAD is in place; give 100% oxygen;  
confirm adequate sedation/anaesthesia, ventilation & paralysis

## Aintree catheter

- ◆ 56cm long hollow catheter
- ◆ 6.5mm outer diameter; 4.7mm inner diameter
- ◆ Easily preloaded onto an appropriately sized intubating fibrescope (maximum insertion cord diameter - 4.2mm)
- ◆ Flexible enough for loading over fibrescope
- ◆ Stiff enough to facilitate railroading of tracheal tube
- ◆ Comes with 2 rapifit adaptors (please refer to manufacturer's guidelines)
- ◆ Used for SAD assisted orotracheal fibreoptic intubation

1



Having prepared the fibrescope (FS) and camera system, lubricate the outer surfaces of both the Aintree Intubation Catheter (AIC) and FS.

4



Note depth of AIC. With assistant immobilising SAD and the operator maintaining the position of AIC, the FS alone is withdrawn after removal of securing tape.

5



2



The SAD should be immobilised by an assistant. Introduce FS with loaded AIC through top port of swivel connector into the SAD lumen.

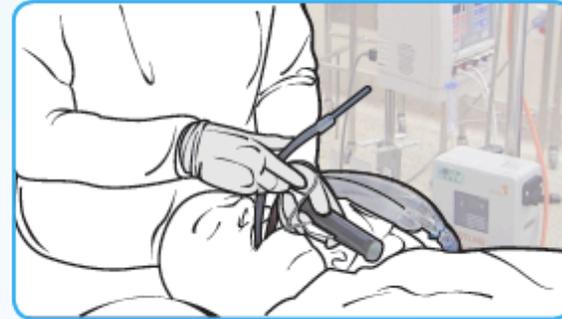
3



Sequentially visualise SAD aperture bars (if present), glottis, tracheal rings and finally carina as the FS passes caudally. **Never advance beyond carina.**

Again note the depth of AIC at the lips, ensuring that it never exceeds 26cm.

6



Using a laryngoscope, railroad the tracheal tube (ETT) over AIC ensuring a 'tip anterior' orientation. Use a conventional ETT - minimum size is 7.0 and pre cut to appropriate length.

7

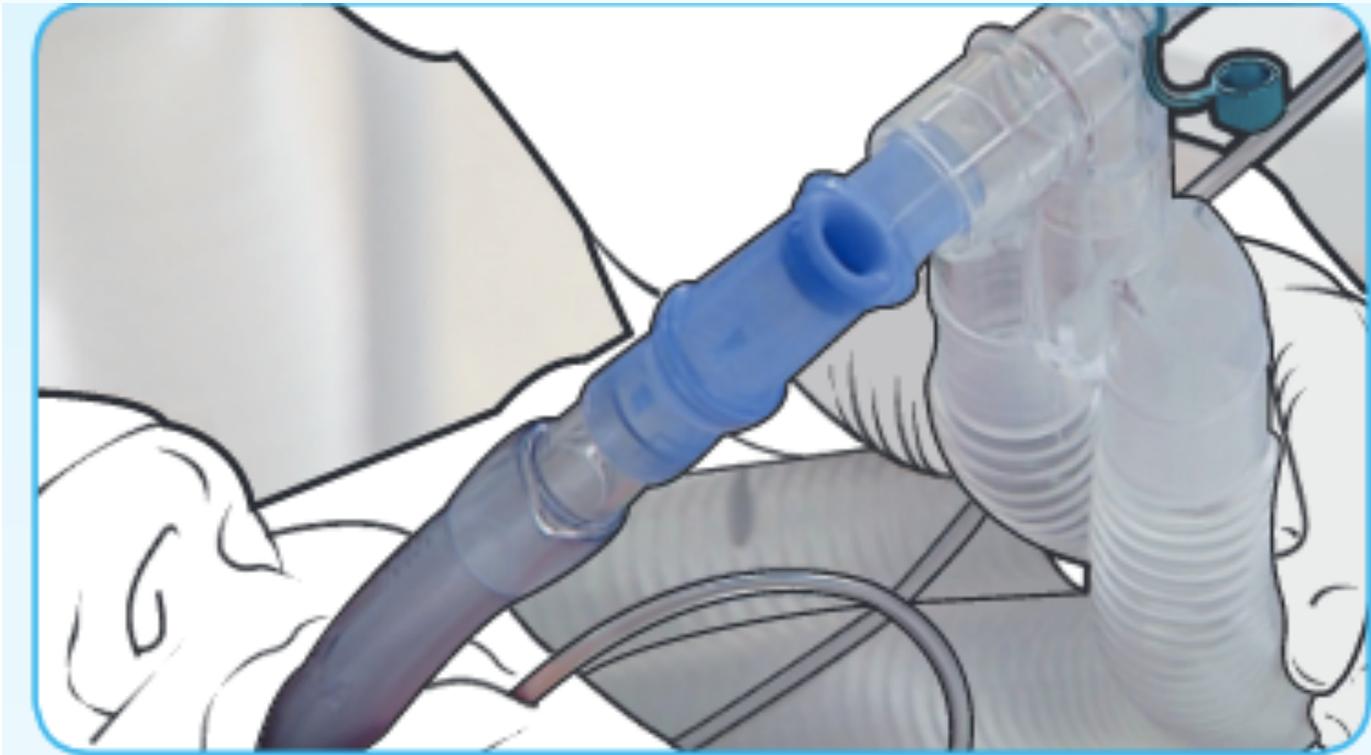


Reconnect circuit and re-establish anaesthesia and ventilation. Confirm end-tidal CO<sub>2</sub>. Consider FS confirmation of ETT position.

- ◆ This is not an airway rescue technique
- ◆ It should be performed in a controlled stepwise process
- ◆ The process is designed to provide continued ventilation/oxygenation via the SAD and swivel connector until the SAD is removed and tracheal tube is railroaded in place

# Step 1

Having prepared the fibrescope (FS) and camera system, lubricate the outer surfaces of both the Aintree Intubation Catheter (AIC) and FS. Preload AIC onto FS and secure with tape. Attach a 15mm bronchoscopic swivel connector (with port) to SAD and attach the anaesthetic circuit to the swivel connector. Confirm adequate anaesthesia, muscle relaxation and assisted ventilation.



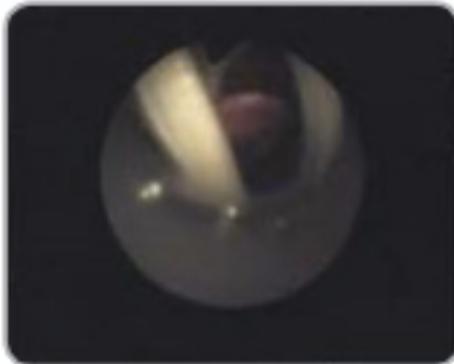
## Step 2

The SAD should be immobilised by an assistant. Introduce FS with loaded AIC through top port of swivel connector into the SAD lumen.



## Step 3

Sequentially visualise SAD aperture bars (if present), glottis, tracheal rings and finally carina as the FS passes caudally. **Never advance beyond carina.**



# Step 4

Note depth of AIC. With assistant immobilising SAD and the operator maintaining the position of AIC, the FS alone is withdrawn after removal of securing tape.



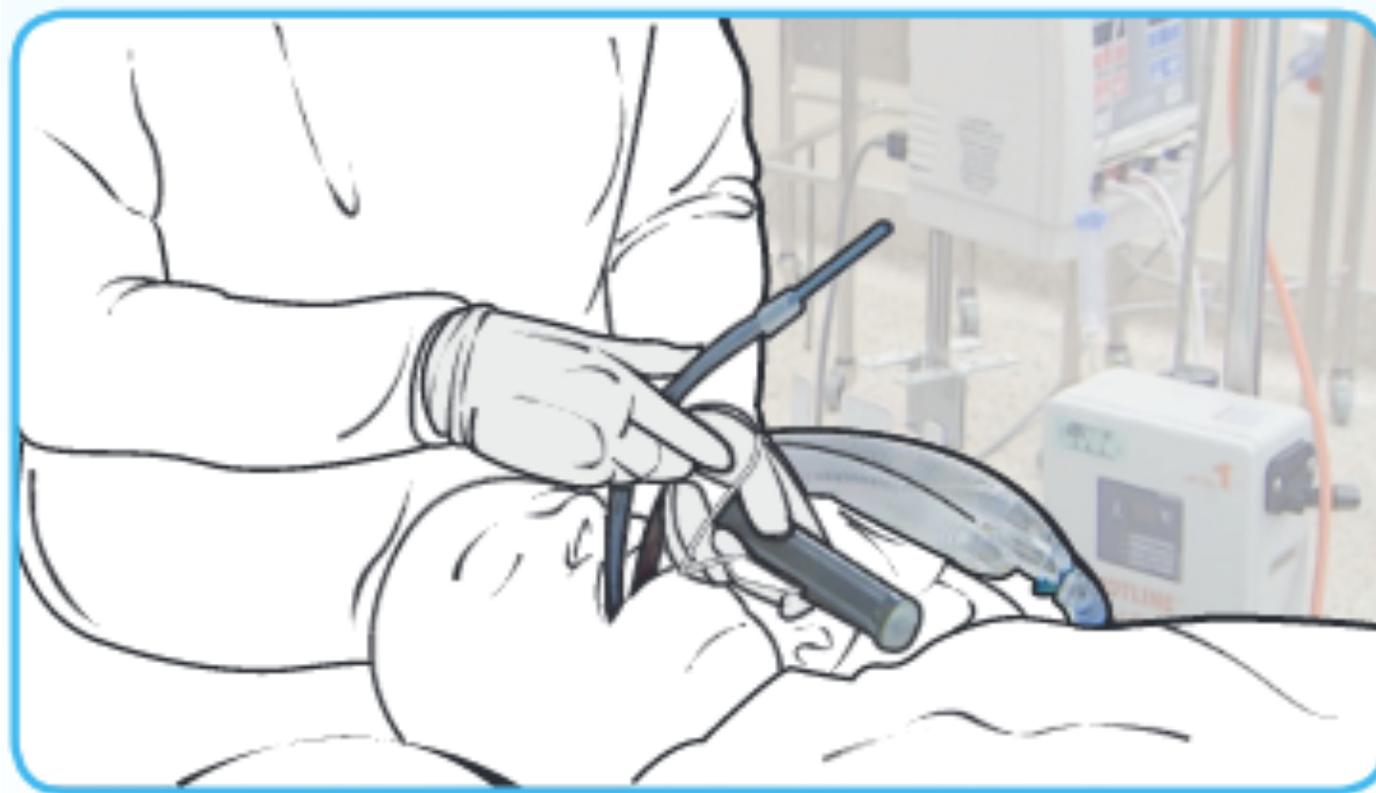
# Step 5

Briefly disconnect SAD (along with swivel connector) from anaesthetic circuit, deflate cuff (if present) and start withdrawing SAD (along with swivel connector), applying counter pressure on AIC to prevent movement. Once the SAD cuff becomes visible, grasp AIC in the mouth and fully remove SAD with the swivel connector. The process should be done with care. Again note the depth of AIC at the lips, ensuring that it never exceeds 26cm.



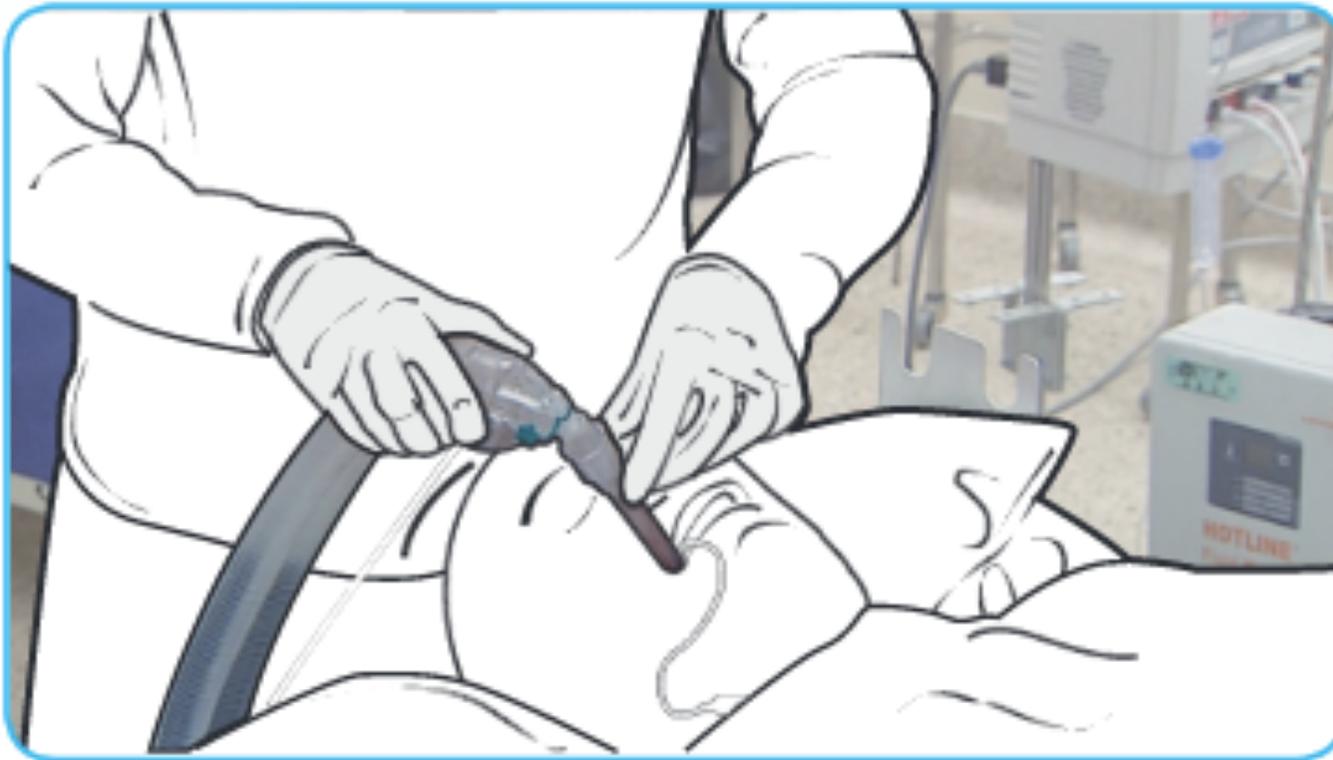
# Step 6

Using a laryngoscope, railroad the tracheal tube (ETT) over AIC ensuring a 'tip anterior' orientation.  
Use a conventional ETT - minimum size is 7.0 and pre cut to appropriate length.



# Step 7

Reconnect circuit and re-establish anaesthesia and ventilation.  
Confirm end-tidal CO<sub>2</sub>. Consider FS confirmation of ETT position.



- ❖ This is not an airway rescue technique
- ❖ It should be performed in a controlled stepwise process
- ❖ The process is designed to provide continued ventilation/oxygenation via the SAD and swivel connector until the SAD is removed and tracheal tube is railroaded in place
- ❖ Oxygen can be delivered via the AIC in situations where railroading of tracheal tube is prolonged; assisting ventilation via this route is often suboptimal (narrow diameter/lack of cuff) - Refer to manufacturer's guidelines for methods of oxygen delivery.

#### **Recommendations**

1. Consider a second anaesthetist in addition to a trained assistant.
2. Use a camera system for fibrescope.

#### **Caution**

The aintree catheter is not recommended with the LMA Supreme.

- Aintree Intubating Catheter (ED of 6.5mm): size 7.0 cuffed ETT or above
- LMA / PLMA / ILMA
  - size 3 (ID of 10 mm): size 6.0 cuffed ETT
  - size 4 (ID of 10 mm): size 6.0 cuffed ETT
  - size 5 (ID of 11.5 mm): size 7.0 cuffed ETT
- iGel
  - size 3: size 6.0 Cuffed ETT
  - size 4 (ID of 12.3 mm) : size 7.0 cuffed ETT
  - size 5: size 8.0 cuffed ETT

## Fibreoptic-assisted intubation via the LMA using the Aintree Intubating Catheter (2 stage technique)

1. The **head and neck** should be supported in the **neutral position**. Insert an LMA in the usual fashion. Inflate the cuff and confirm adequate ventilation, then administer a muscle relaxant.
2. **Load the AIC over a well lubricated bronchoscope**, then guide the assembly through the LMA grille and into the trachea, until the carina is visualised.
3. Remove the bronchoscope from the AIC. The “Rapi-fit” connector (which comes with the AIC) may be fitted to allow oxygenation using any anaesthetic circuit with a 15 mm connector.

## Fibreoptic-assisted intubation via the LMA using the Aintree Intubating Catheter (2 stage technique)

4. Remove the LMA and railroad a lubricated ETT size 7.0 or above.
5. Confirm placement of the ETT using auscultation and capnography. Use of Aintree Intubating Catheter is preferable because:
  1. It allows removal of the LMA
  2. It reduces the likelihood of the ETT getting caught in the LMA grille
  3. It enables oxygenation via the “Rapi-fit” connector in case of difficulty passing ETT