

**Best Practice Points**

1. Assess the airway before induction of anaesthesia.
2. Check all intubation equipment daily and be familiar with its use.
3. Position the patient correctly before induction.
4. Remember that oxygenation is more important than intubation
5. Call for help early

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**For review June 2006\***

**Guideline still current – under review by Intrapartum Clinical Team**

# Failed Tracheal Intubation

## Definition

There are different definitions of failed tracheal intubation but one that is particularly relevant to trainees working in obstetric units is “a failed intubation is one that is not accomplished following a single dose of succinylcholine” (1).

## Background

Failed tracheal intubation is an important factor contributing to maternal mortality (2). The latest Confidential Enquiry into Stillbirths and Deaths in Infancy also contains two reports in which difficulties with intubation caused delay in delivery of an already compromised fetus (3). Ideally we would be able to predict, and plan for, all difficult intubations. However, most airway tests are unreliable so we will inevitably be faced with some unexpectedly difficult or impossible intubations. The next best option is to have a robust plan for the management of such a situation.

## Incidence

The incidence of failed tracheal intubation in the general surgical population is approximately 1: 2200 but the incidence in the obstetric population may be as high as 1:250 (4, 1). Pharyngeal oedema probably explains some of this difference and it has been shown that Mallampati scores worsen throughout pregnancy (5).

1. PD Barnardo, JG Jenkins. Failed tracheal intubation in obstetrics: a 6-year review in a UK region. *Anaesthesia* 2000; **55**: 685-694
2. Anon. *Report on Confidential Enquiries into Maternal Deaths in United Kingdom: 1985-87, 1988-90, 1991-93*. London: HMSO
3. Anon. *7<sup>th</sup> Annual Report of the Confidential Enquiry into Stillbirths and Deaths in Infancy: 2000*, Maternal and child Health Consortium
4. GLT Samsoon, JRB Young. Difficult tracheal intubation: a retrospective study. *Anaesthesia*, 1987; **42**: 487-90
5. S Pilkington, F Carli et al. Increase in Mallampati score during pregnancy. *British Journal of Anaesthesia* 1995; **74**: 638-642

## **Management of Failed Tracheal Intubation**

- Check the intubation equipment on arrival on delivery suite at the start of the day
- Make a preoperative assessment of the airway and call for help if you predict problems
- Position the patient with the neck flexed and the head extended (at least one pillow under the head)
- Make sure your assistant knows how to perform cricoid pressure
- If you are unable to intubate but can see the epiglottis try using the gum elastic bougie and / or the McCoy blade
- Call for help
- Reposition the head whilst maintaining cricoid pressure and try again as above
- Do not give another dose of suxamethonium
- Try and ventilate the patient using a mask and Guedel airway
- If this is not possible reduce and, if necessary, release the cricoid pressure
- If you still cannot ventilate insert a laryngeal mask
- If you still cannot ventilate, and the patient is not waking up, perform a cricothyroid puncture using the minitrach kit
- When ventilation has become possible you need to decide whether surgery has to continue immediately or not
- If surgery does not have to be carried out immediately wake the patient up and consider regional anaesthesia or an awake fiberoptic intubation
- If surgery does have to be carried out immediately and you are able to ventilate the patient easily with a face mask or laryngeal mask continue with a spontaneously breathing anaesthetic with isoflurane. Use cricoid pressure if possible
- If you have performed a cricothyroid puncture you may need to use intravenous agents such as propofol to keep the patient asleep

# Management of Failed Tracheal Intubation

(unable to intubate after 2 attempts despite repositioning and use of bougie and/or McCoy blade)

