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Tracheal intubation in children using the laryngeal mask

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Compromised airway

Airway where we anticipate both a difficult mask ventilation and a difficult intubation

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Used equipment

RUESCH (Germany) blue swivel connector: „Mainzer Adapter“

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Children with compromised airway

- **Craniofacial malformations**
- **Mucopolysaccharidoses**
- **Compromised mouth openening**

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Difficult pediatric airway and LMA

Author	Year	Difficult Airway Syndrome	Intub.
Beveridge ME	1989	Pierre-Robin	no
Ebata T et al.	1991	Treacher-Collins	no
Goldie AS et al.	1992	Treacher-Collins	FOI
Inada T et al.	1995	Treacher-Collins	FOI
Walker RWM et al.	1997	Mucopolysaccharidoses	FOI
Bakh JH et al.	1999		FOI
Iohom G et al.	2002	Unusual facies	FOI
Muraika L et al.	2003	Treacher-Collins	FOI

Series of cases with difficult pediatric airway

- **FOI via an LMA in 34 children**
  - Mucopolysaccharidoses (n=22)
  - Craniofacial syndromes (n=12)
- **LMA provides a good airway in all cases**
  - Ideal to fiberoptic intubation
- **Anesthetic technique**
  - Inhalational induction with HAL and SEVO
  - Children were kept spontaneously breathing
  - Topical anesthesia with lidocaine

Walker RWM: The laryngeal mask airway in the difficult paediatric airway: an assessment of positioning and use in fibreoptic intubation. Paediatr Anaesth 2000; 10:53-58

Fiberoptic intubation via LMA of an infant with 5,6 kg BW with Pierre-Robin sequence

Technique in 6 steps

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Step 1: Ventilation via LMA

- Mask induction with sevoflurane
- Insert a LMA # 1,5
- Prepare the LMA with a 90 degree swivel connector
- Ventilate the patient

Step 2: Insert a thin fiberoptic bronchoscope prepared with the endotracheal tube into the trachea

- **Thread the 2.3 mm fiberscope through the 3.5 mm tracheal tube**
- **Insert the fiberscope through the LMA into the trachea**

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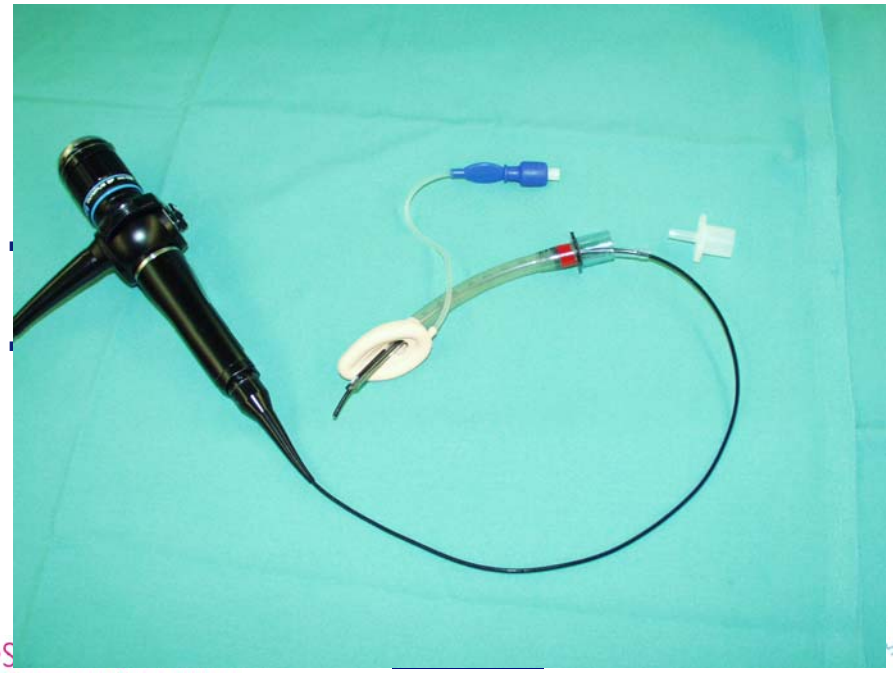

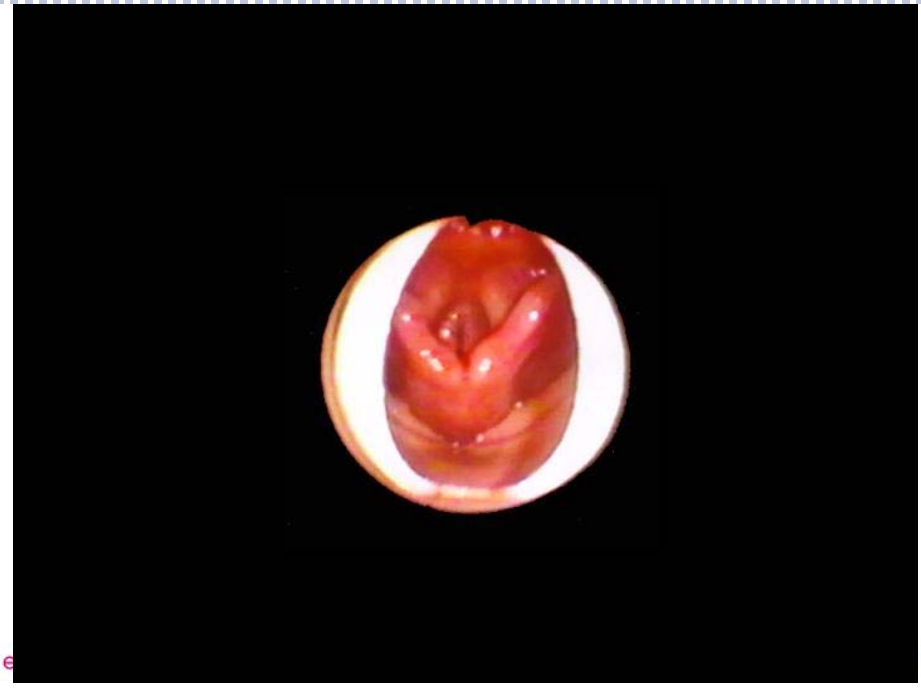

Step 3: Place the tube into the trachea

- **Pull the swivel connector towards the handle of the fiberscope**
- **Place the tracheal tube through the LMA into the trachea using the fiberscope as a guide wire**

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Step 4: Ventilate the patient

- Remove the fiberscope
- Remove the swivel connector
- Add the tube connector
- Connect the patient with the ventilator
- Ventilate the patient
- Relax

Step 5: Remove the LMA

- **Secure the tracheal tube with a thin and long forceps (e.g. endoscopy, bonchoscopy)**
- **Pull and remove the LMA**

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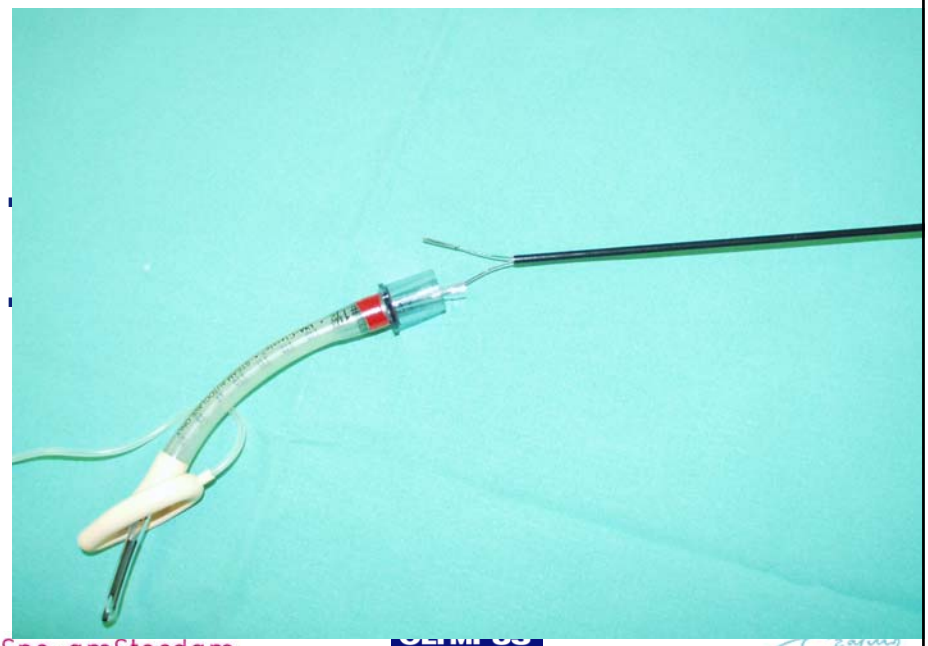

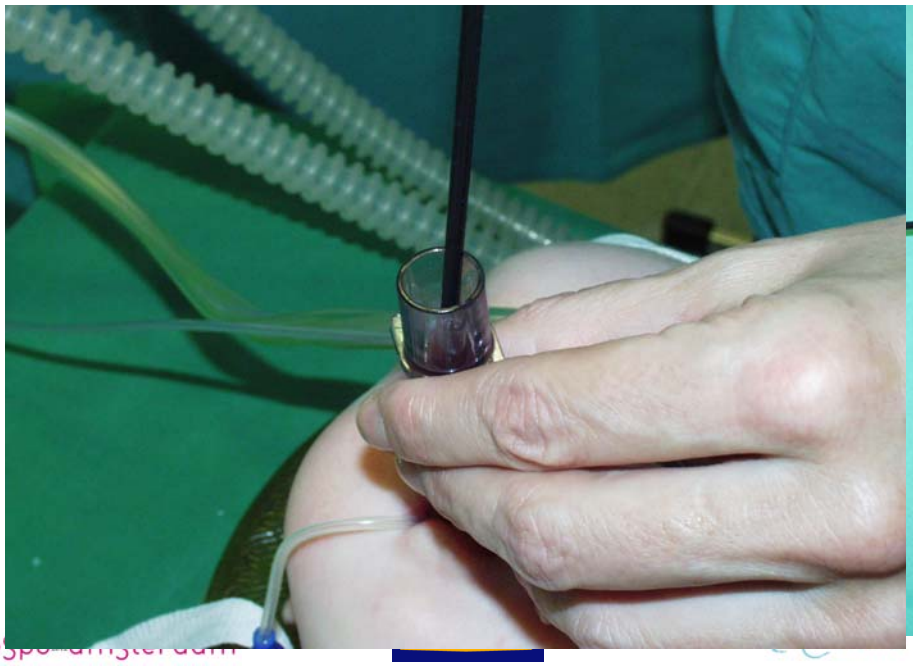

Step 6:: Place the tube

- Place the tube
- Ventilate the patient and fix the tube as usual

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