



Fiberoptic intubation in children.

David Shoseyov MD
Pediatric Pulmonology Unit
Hadassah Hospital
Jerusalem



What is it good for

- Difficult intubation
- Difficult airway algorithm for pediatric patients has to consist of three part
 - A-oxygenation
 - B- tracheal intubation
 - C - rescue



If direct laryngoscopy fails,

- We have to use alternative glottis visualization device
- Do we really need video laryngoscopy?
 - Conventional laryngoscopy is successful and effective in around **98.5%** of cases.



Conclusion



- Fiberoptic-assisted tracheal intubation combined with extraglottic airway devices is the standard of care.
- WE SHOULD
 - Establish protocols for equipping and maintaining airway trolleys
 - Regular training in their use to avoid tissue hypoxia in children with compromised airway.



Awake (??) bronchoscopy in children

- Awake fiberoptic intubation with topical anesthesia in anticipated difficult airway is regarded as the safest approach
- Patient's co-operation is essential, **so it is not an ideal option for children.**
 - Topical anesthesia of airway improves child's acceptance of an airway device and blocks airway reflexes.
 - Nebulized lignocaine 4%, lignocaine viscous 2% and lignocaine spray 10% all are useful and can be used preoperatively or during induction.
 - It can be used as a sole technique in adults **but in children** it is used in conjunction with either inhalational or intravenous induction.



Awake (?? – no!) bronchoscopy in children

- Intravenous anesthetics can precipitate sudden loss of airway control and apnea, which may result in cannot intubate or ventilate situation.
- Inhalational induction in children using Sevoflurane is preferred
 - Spontaneous breathing can be preserved
 - It has a low blood gas solubility of 0.69
 - It is least irritating to the airway.

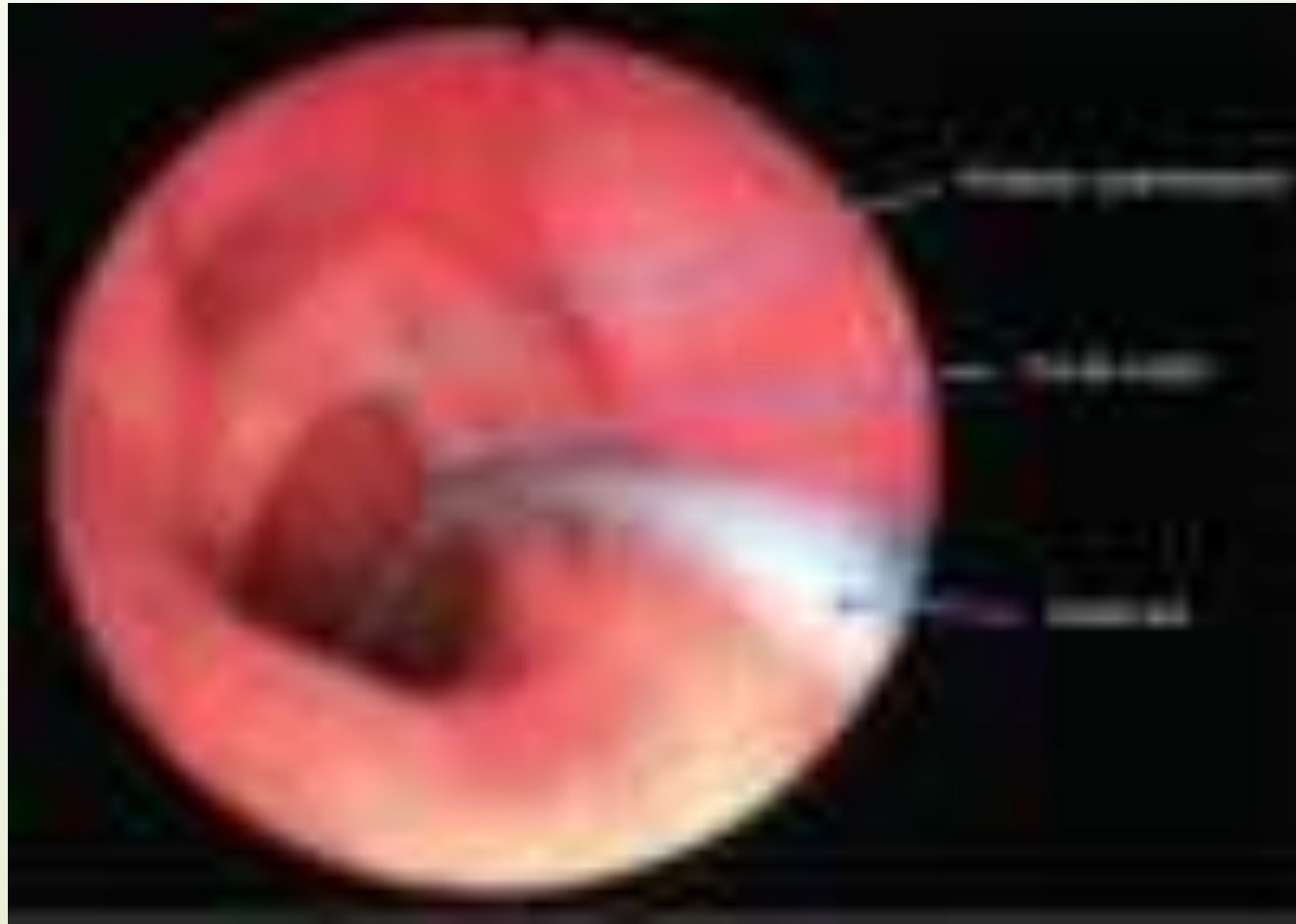


CASE REPORT

Pierre Robin difficult intubation

- Bronchoscope was placed via the nose into the hypopharynx.
- Visualization of anatomical landmarks was difficult due to the superior and anterior position of the glottis and the presence of blood and secretions;
- However, the bronchoscope was passed easily into the trachea
- A 0.035 inch diameter, 150 cm soft-tipped wire was passed via the suction port of the bronchoscope into the trachea
- The bronchoscope was removed over the wire, and a 3.5 mm internal diameter endotracheal tube was passed into the airway over the wire.

The j-tipped guidewire inserted via the working channel of the FFB entering the trachea

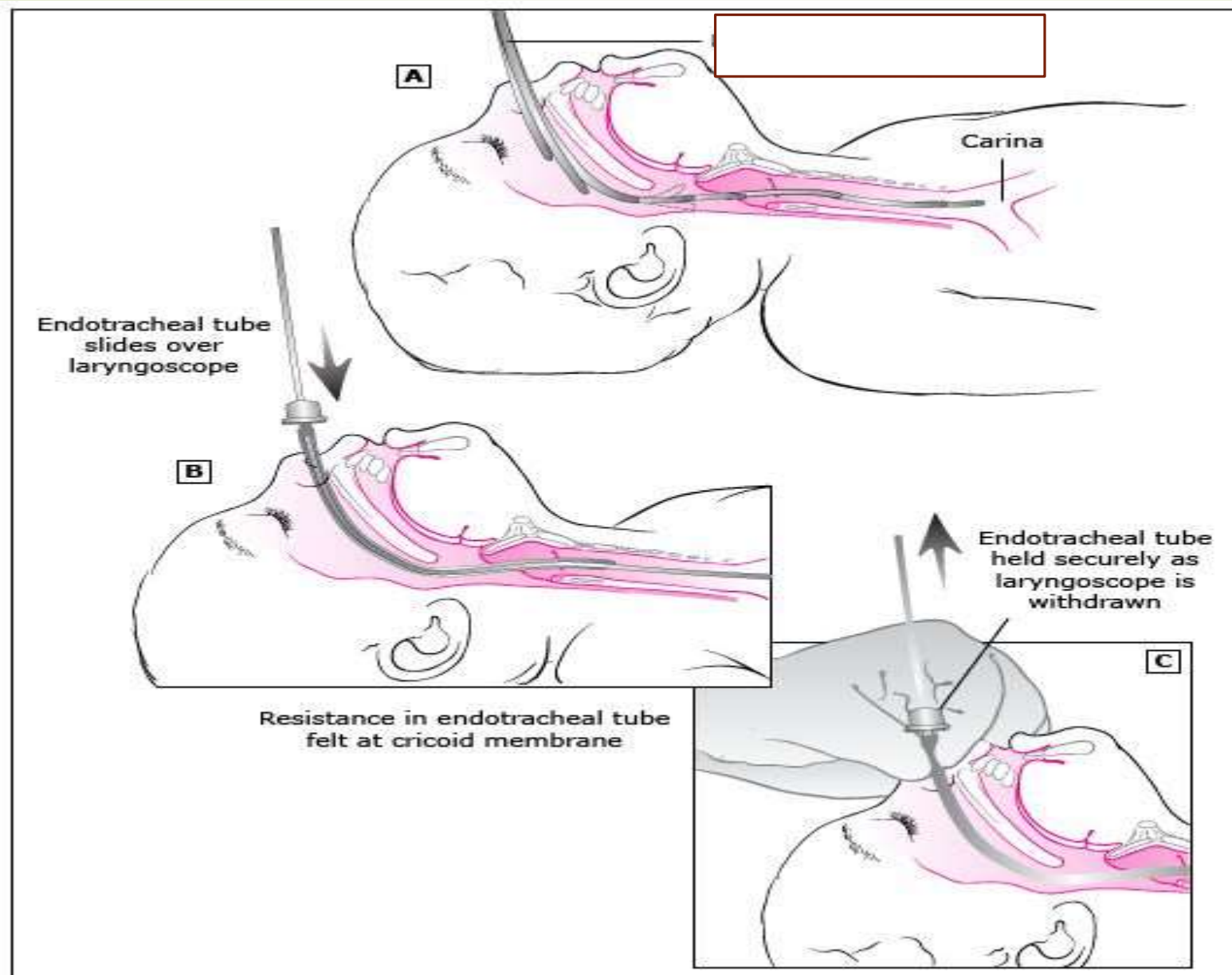




Our technique


- Our recommendation is to intubate through the nasal approach
- Be sure to suction the secretions from the pharynx before and during the procedure with a suction catheter.
- For nasotracheal intubation, the most permeable nostril must be used.
- Pour esracain jell inside the selected nostril before the procedure.
- Insert the ET tube through the nostril only after you observed that the bronchoscope pass the tube lumen

Our technique



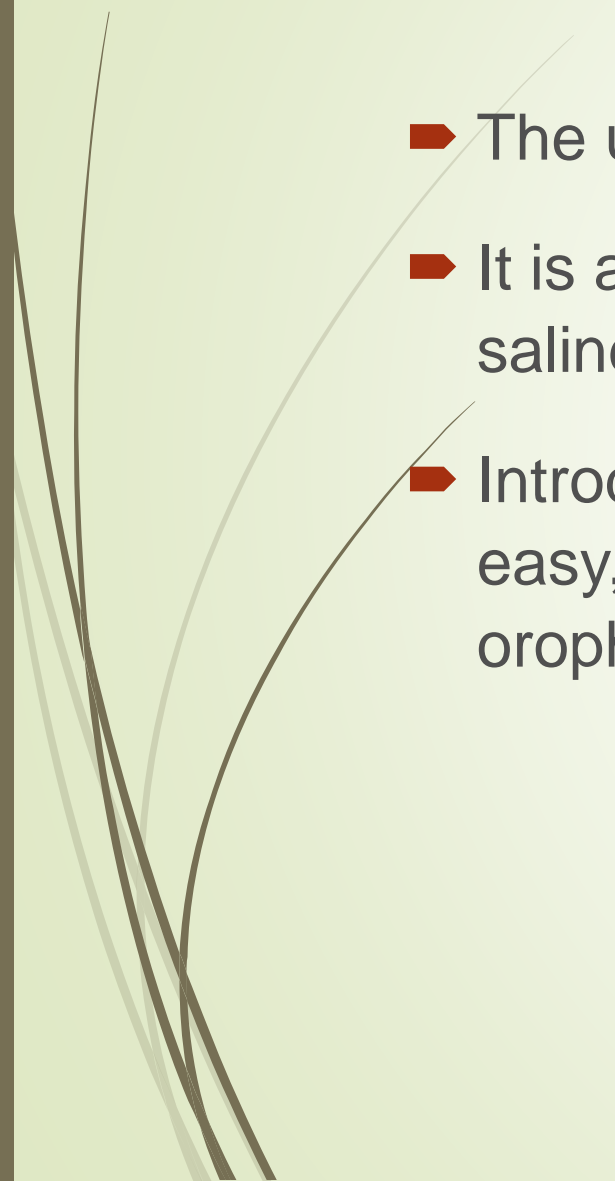


Our technique

- Insert the bronchoscope until you visualize the vocal cord
 - Spray lidocaine 1% on the vocal cord through the bronchoscope
 - Pass the scope into the trachea and then insert the tube over the scope
 - You may see that the tube is just above the carina
- 



Our technique

- The use of a bite protector is mandatory for orotracheal intubation.
 - It is also recommended to warm the tube by placing it in warm saline solution in a basin in order to improve its flexibility
 - Introduction of the fiberoptic bronchoscope into the airway may be easy, but advancing the tube may be difficult because of the oropharyngeal and hypopharyngeal angles.
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Submandibular Abscess and Trismus



Lips Adhesion



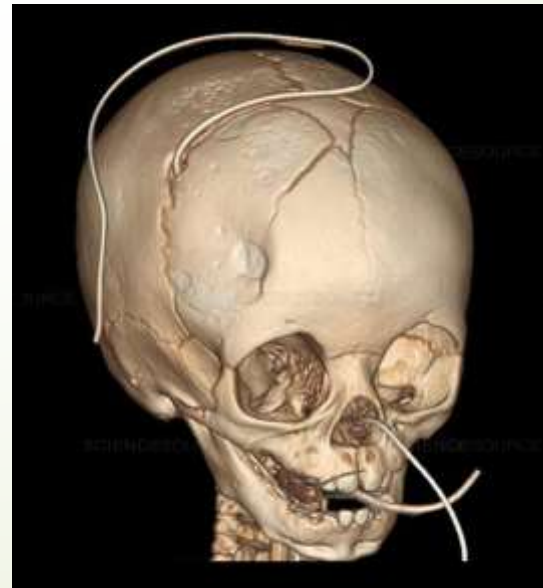
Syngnathia



What is syngnathia?

■ Synechiae vs synostosis

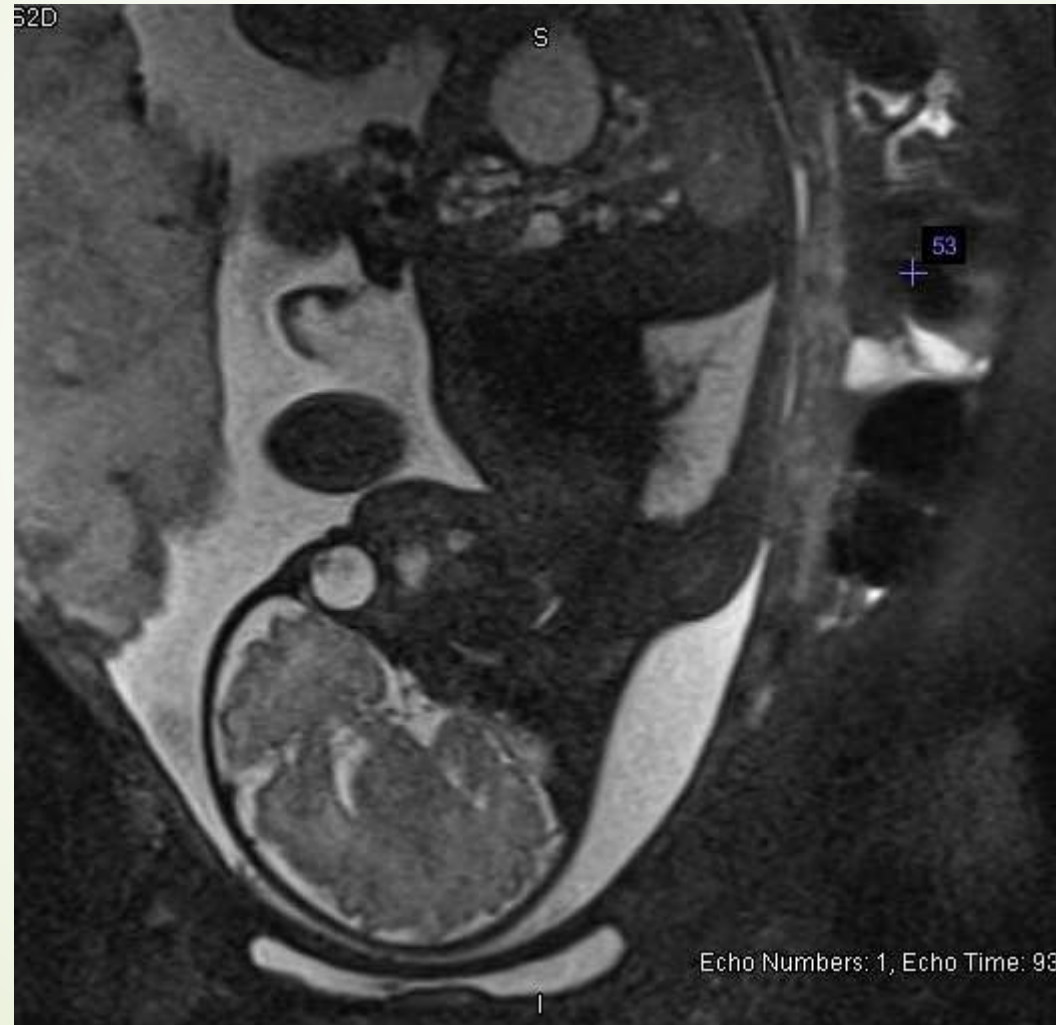
- Congenital fusion of the maxilla **and** mandible (syngnathia) is rare
- Can present in a wide range of severity from single mucosal bands (**synechiae**) to complete bony fusion (**synostosis**).



What is syngnathia?

- Associated with:
 - micrognathia, TMJ anomalies, ear deformities, orbital deformities, deviated nasal septum
 - microglossia, cleft lip, cleft palate
- Breathing, feeding, aspiration, speech
- Extra-craniofacial manifestations?
- Isolated case reports

STICKLER SYNDROME



Temporal- mandibular Joint ankyloses



Neonatal Cystic Hygroma



Freeman–Sheldon syndrome – whistling face and short webbed neck.



The Airway

Treacher Collins Syndrome



Pierre Robin Syndrome



The Airway

Galel Yakobi Syndrome





Thank You!

