

PBLD Review: October 14-18 at the Annual Meeting

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This year the 15th Annual Problem-Based Learning Discussions were presented on October 14-18 at the Chicago Hilton Hotel during the annual meeting of the American Society of Anesthesiologists.

During the beverage session, on October 14th, Dr. Tatyana C Strong, M.D. and the participants discussed a case of a 3-year-old boy who developed a sore throat, high fever and cough with respiratory distress before his presentation to the Emergency Room. In the ER his temperature was 39.2°C, heart rate 145/min, BP 104/49mmHg, 40/min and oxygen saturation of 89% on room air. Clinically he appeared lethargic and sleepy with significant stridor, intercostal retraction and use of the accessory muscles.

He was given 40% FIO₂ via mask with rise in oxygen saturation to 94%. A peripheral IV was started. He was also given nebulized albuterol and a dose of racemic epinephrine without effect. Heliox was also used with improvement in his symptoms and a rise in oxygen saturation to 97%. Lateral view of the chest and neck X-Rays revealed possible narrowing of the sub-glottic airway. Surgical plan was rigid bronchoscopy under general anesthesia due to suspected epiglottitis or bacterial tracheitis.

Patient was induced with halothane in 100% FiO₂ after standard ASA



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monitors were placed. Assisted ventilation was successful. Propofol infusion was started in addition to inhaled halothane and the airway was turned over to the surgeon. Rigid bronchoscopy was performed while spontaneous ventilation was maintained. A diagnosis of bacterial tracheitis was confirmed. The tracheal secretions were cleared with suction and forceps. After the completion of the procedure the patient was intubated with an appropriately sized endotracheal tube and transferred to the ICU. He remained intubated in the ICU for 48 hours and was extubated uneventfully. He was discharged home several days later.

Different questions were raised and discussed by the participants on how to provide anesthesia care to this child and how to manage his airway. Some of the issues discussed were:

- Do we need an IV before induction in these kind of scenarios and what if this patient didn't have the IV.
- How to induce this patient with an impending airway obstruction.
- Is IM Ketamine a good choice for induction.
- Benefit of letting the patient breathe spontaneously.
- Pros and cons of using paralysis for this patient.
- What anesthesia delivery options are available during the rigid bronchoscopy.
- Would awake tracheostomy be the first option.

All the participants agreed on having multiple options and tools available for securing the airway in patients who may have an impending airway emergency. Everyone agreed to proceed with inhalational induction after the placement of an intravenous line and letting the patient breathe spontaneously. ENT surgeon should be available on the bedside before any kind of manipulation of the airway is attempted.