

Anesthesia Management of Head and Neck Surgery in the Adult

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Global Objectives

- Discuss “Airway is not the most important thing, it is the only thing”
- Discuss current trends in anesthesia management of head and neck surgery in the adult patient
- Identify ways to make fun of Otorhinolaryngologists

Airway Anatomy

- An understanding of the anatomical structures of the airway are important to allow for establishing, maintaining and reestablishing the airway

Anatomy of the Airway

- Nose
 - Nasal Cavity
 - Lateral Walls
 - Posterior Nares (Choana)
- FUNCTION
 - Conduit to the lower respiratory tract
 - Warming, humidification and cleansing of inspired air
 - Olfaction
 - Phonation (Additional resonating chamber for certain consonants)

Airway Anatomy CONTINUED

- Pharynx
 - Musculofascial tube that connects the nasal and oral cavities with the larynx and esophagus
- Three Sections
 - Nasopharynx
 - Oropharynx
 - Hypopharynx

Airway Anatomy CONTINUED

- Why I Hate the Pharynx
 - Delicate muscular framework makes it prone to lacerations, false passages, dissection

Airway Anatomy CONTINUED

- NASOPHARYNX
 - Situated behind the nasal cavity
 - Associated with 5 passages
 - 2 nasal choanae
 - 2 eustacian tubes
 - 1 inferior outlet of the oropharynx

Airway Anatomy CONTINUED

- OROPHARYNX
 - Lies directly posterior to the oral cavity from the soft palate to the tip of the epiglottis inferiorly

Airway Anatomy CONTINUED

- HYPOPHARYNX

- Extends inferiorly from the upper edge of the epiglottis to the inferior edge of the cricoid cartilage and communicates with the oropharynx and the esophagus

Airway Anatomy CONTINUED

- LARYNX

- Continuous with the trachea
- Constrictor mechanism results in rapid closure that prevents food, liquid, and other foreign material from entering the lower airway
- Vocal Cords have a vibratory effect on the expiratory air column that produce the sounds used in voice production

Airway Anatomy CONTINUED

- Laryngeal Skeleton
 - Thyroid cartilage, Cricoid cartilage, Hyoid bone
 - Thyroid cartilage is responsible for the visible bump...AKA Adam's Apple
 - Cricoid cartilage
 - Only complete ring in the larynx and supports the posterior laryngeal structures
- Isaacs, R., Sykes, J. Anatomy and Physiology of the upper airway. *Anesthesiology Clin N Am* 20 (2002) 733-745

Tracheostomy

- References to the procedure in a Hindu text in 2000 B.C.
- 15th Century Prasovala...first successful
- 1799 George Washington died of an upper airway obstruction
 - His physician knew of the procedure but was unwilling to perform his first one on the first president

Tracheostomy

- 1830-1930
 - Performed only in emergencies for children suffocating from diphtheria
- 1907 Chevalier Jackson wrote a textbook in which he standardized the technique
 - Some of the basic equipment and techniques are still utilized today

Tracheostomy INDICATIONS

- Airway obstruction above or at level of larynx
- Respiratory failure requiring prolonged mechanical ventilation



Tracheostomy Complications

- 1. Perioperative
- 2. Postoperative
- 3. Late/Postdecannulation

Anesthetic Implications Tracheostomy

- Evaluation
 - 1. Scheduled Procedure
 - 2. Emergent
- Type of procedure
 - 1. Open
 - 2. Percutaneous

Anesthetic Implications Tracheostomy

- Anesthesia Plan
 - Awake Trach
 - Endotracheal Tube Insitu
- “Bad breath is better than no breath at all”
 - Sometimes less is more
 - Any airway is better than no airway at all

SURGERY

