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
• 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 budge…AKA Adam’s Apple
  – Cricoid cartilage
    • Only complete ring in the larynx and supports the posterior laryngeal structures

Tracheostomy

- References to the procedure in a Hindu text in 2000 B.C.
- 15th Century Prasovala...fist 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 diptheria

• 1907 Chevalier Jackson wrote a textbook in which he standardized the technique
  – Some of the basic equipment and techniques are still utilized today
Tracheostomy \textbf{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