Deep Neck Space Abscesses and Life-Threatening Infections of the Head and Neck
INTRODUCTION

- Life-threatening infections - rare
- Influence of antibiotics
- Lack of systemic signs and Sx
- Immunosuppression
ANATOMIC CONSIDERATIONS

- Teeth, tonsils
- Polymicrobial infections
  - 10:1 anaerobes
- Pathways of spread
  - fascial planes
  - intracranial
  - periorbital
DEEP NECK SPACE INFECTIONS

- Usually odontogenic
  - young, healthy, delayed Tx
- Cervical Fascial Layers
  - Superficial fascia
  - Deep fascia
    - superficial (investing)
    - middle (visceral)
    - deep (prevertebral and alar layers)
SUBMANDIBULAR SPACE

- 1836 - Wilhelm Von Ludwig
  - implies bilateral involvement
- boundaries
  - Hyoid to FOM
  - Ant/lat - mandible
  - Mylohyoid “sling”
  - bucopharyngeal gap
LUDWIG’S ANGINA

- dysphagia, drooling, muffled voice
- “woody” induration, no fluctuance
- Treatment
  - airway control
  - IV ABX
  - Surgical drainage
LATERAL PHARYNGEAL SPACE

- Inverted cone - hyoid to base of skull
- Pre-styloid compartment
  - fat, lymph nodes, muscle
- Post-styloid
  - carotid, IJ, CN IX - XII
- pain, fever, neck swelling, ?trismus
LATERAL PHARYNGEAL SPACE

- Ominous signs
  - Horner’s, bleeding, CN palsies, mediastinitis

- Treatment
  - Surgical drainage
  - IV ABX
    - jugular vein thrombosis
RETROPHARYNGEAL SPACE

- Retropharyngeal space
  - between alar layer and sup. constrictors
  - extends to sup mediastinum
- Danger space
  - between alar and prevertebral layers
  - diaphragm
- Prevertebral space
  - down to coccyx
MASTICATOR SPACE

- Pterygoids, masseter, temporalis m.
- Comm w/ temporal space superiorly
- Trismus!
- CT can direct surgical approach
PERITONSILLAR ABSCESS

- Areolar tissue bound by sup. constrictors
- Rarely life-threatening but can spread
- Serial aspiration vs I and D
NECROTIZING FASCIITIS

- Synergistic, polymicrobial infection
- Sup layer of deep fascia
- Determining necrosis is Key
  - gas, crepitance, failure to respond to ABX
- Treatment
  - IV ABX
  - Radical surgical debridement
ACUTE EPIGLOTTITIS

- Now rare in children
- “Hot potato” voice, drooling, fever
- No FILMS - go to OR!
  - no fiberoptic exam
  - bronch, trach equipment ready
  - change to nasotracheal tube
MUCORMYCOSIS

- Progressive, invasive fungal infection
- Severe DM or immunocompromised
- Black necrotic lesions of nose or palate
- Radical surgical debridement to bleeding
- Broad, nonseptate hyphae, right angles
- Amphoterrible
COMPLICATIONS OF SINUSITIS

- Parameningeal, periorbital location
- Frontoethmoid sinuses
  - frontal lobe abscess, meningitis, subdural empyema
- Sphenoid sinuses
  - Sup orbital fissure, cavernous sinus
- Sx of increased intracranial pressure
OTOLOGIC COMPLICATIONS

- Involve middle or posterior fossa
- Epidural abscess > meningitis > brain abscess
- Warning signs
  - early - malodorous discharge, fever, HA
  - late - facial paralysis, vertigo
- Multiple complications are common
- Malignant otitis externa