RETROPHARYNGEAL AND PARAPHARYNGEAL ABSCESS

Retropharyngeal Abscess

Background
1. Retropharyngeal space: extends from base of skull to superior and posterior mediastinum
2. Extends to first and second thoracic vertebrae
3. Infection can spread to mediastinum and cause necrotizing mediastinitis

Pathophysiology
1. A serious deep space infection in neck
2. Children 2-4 years old: follows URI with suppuration of lymph nodes in retropharyngeal space
3. Adults: Retropharyngeal lymph nodes atrophy by 2-4 years of age
   - Abscesses caused by
     - Foreign body ingestion
     - External trauma
     - Instrumentation: intubation or esophagoscopy
4. Pathogens
   - Polymicrobial: resident flora or oral cavity and respiratory tract
   - Most common: Strep pyogenes, Staph aureus

Diagnosis
1. Most common in children younger than 3 years old
2. Symptoms
   - toxic appearing
   - fever
   - neck pain/torticollis
   - muffled voice
   - dysphagia
   - snoring
   - stridorous breathing
   - drooling
   - trismus
   - airway obstruction
3. Supine position preferred since forced sitting can increase airway compromise
4. Diagnostic Testing
   - CT scan to assess extent of involvement: preferred test
   - X-ray soft tissue: lateral neck: prevertebral swelling, possible air/fluid level
5. Laboratory evaluation
   - CBC
   - Blood Culture
6. Complications:
   - Airway obstruction
   - Rupture with aspiration pneumonia
   - Mediastinitis
   - Perforation
   - Sepsis
Differential Diagnosis
1. Epiglottitis
2. Laryngotracheobronchitis
3. Meningitis

Treatment
1. IV antibiotics (to cover for Strep, Staph, anaerobes, Haemophilus influenzae)
   o ampicillin/sulbactam: 3g IV q6h Unasyn
   o clindamycin: 600mg IV q6-8
   o metronidazole 500mg IV q6-8 + PCN G 2-4 MU IV q4-6
2. Intubation may cause rupture of abscess with aspiration
3. Surgical drainage with intraoral incision

Disposition
1. Admit
2. Consult ENT
3. Consult Pediatric Surgery or General Surgery to perform irrigation and debridement if ENT not available.

Parapharyngeal Abscess
Background
1. Parapharyngeal space: space is located on lateral aspect of neck with base at the skull extending to hyoid bone
2. Contents of the space
   o Anterior Compartment: fat, lymph nodes, connective tissue
   o Posterior Compartment: 9th and 12th cranial nerves, carotid sheath, cervical sympathetic trunk
3. Infection can involve carotid sheath or spread along fascial planes and create spaces for abscesses
4. Pathogens: Polymicrobial
   o Most common: anaerobes such as Prevotella, Porphyromonas, Fusobacterium and Peptostreptococcus

Pathophysiology
1. A serious deep space infection in the neck
2. Sources
   o Dental infections
   o Tonsillitis
   o Mastoiditis
   o Deep cervical lymph nodes

Diagnosis
1. History
   o Can follow an URI, pharyngitis, tonsillitis
   o Symptoms
     ▪ Rapid onset of high fever
     ▪ Swelling of lateral neck with obliteration of inferior border of mandible
     ▪ Bulging of pharyngeal wall
     ▪ Trismus
     ▪ Dysphagia
2. Physical Exam
   - Oropharyngeal asymmetry with tonsil displaced medially
   - Painful cervical mass
   - Lymphadenopathy

3. Diagnosis
   - CT scan: assess possibility of mediastinal extension. Good for follow up
   - Ultrasound: distinction between cellulitis and abscess
   - MRI: improved soft tissue definition. Diagnose internal jugular vein thrombosis more accurately

4. Complications:
   - Jugular vs septic thrombophlebitis
   - Erosion of carotid artery
   - Horner's syndrome
   - Cranial nerve palsy 9-12
   - Mediastinitis

Treatment
1. IV antibiotics (strep & anaerobes):
   - Ampicillin/Clavulanic Acid: 150mg/kg per day
   - Penicillin 2-4 MU IV q4-6 plus metronidazole: 500mg IV q6-8
   - Clindamycin if penicillin allergic: 600mg IV q6-8

2. Observation of airway
3. Irrigation and debridement with immediate tonsillectomy

Disposition
1. Admit to hospital
2. Consult ENT
3. Consult Pediatric Surgery or General Surgery for Irrigation and Debridement and tonsillectomy if ENT specialist not available

References