Sore Throat

Summary from Rosen's By Brandon Morshedi

Epidemiology

- Over 2 million visits per year to ED and ambulatory care centers for sore throat or "throat-related" complaints

Pathophysiology

- Inflammation of the soft tissues of the nasopharynx, oropharynx (most common) or hypopharynx
- Regional infections, both viral and bacterial, trigger inflammatory changes in lymphatic tissues within Waldeyer's Ring (i.e. pharyngeal, tubal, palatine, and lingual tonsils)

Differential Diagnosis

- Infectious
    - Viral (i.e. rhinovirus, adenovirus, coronavirus, HSV 1/2, Influenza A/B, Parainfluenza, CMV, EBV, VZV, hepatitis)
    - Common Aerobes (i.e. Strep pyogenes, Peptostreptococcus species, non-GAS, Neisseria gonorrheae, Neisseria meningitides, Mycoplasma pneumonia, Arcanobacterium haemolyticum, Chlamydia trachomatis, Staph aureus)
    - Uncommon Aerobes (i.e. Haemophilus influenzae, Haemophilus parainfluenzae, Corynebacterium diphtheria, Streptococcus pneumonia, Yersinia enterocolitica, Treponema pallidum, Francisella tularensis, Legionella pneumophila, Mycobacterium species
    - Anaerobes (i.e. Bacteroides species, Peptococcus species, Clostridium species, Fusobacterium species, Prevotella species
    - Other (i.e. Candida species)
- Noninfectious
    - Systemic (i.e. Kawasaki disease, Stevens-Johnson syndrome, cyclic neutropenia, thyroiditis, connective tissue disease)
    - Trauma/Misc (i.e. penetrating injury, angioneurotic edema, retained foreign body, anomalous aortic arch, laryngeal fracture, calcific retropharyngeal tendinitis, retropharyngeal hematoma, caustic exposure)
    - Tumor (i.e. tongue, larynx, thyroid, leukemia)

Signs and Symptoms

- Most commonly erythema and edema of pharynx, dysphagia, and odynophagia, with or without petechiae or exudates
- More severe cases include rapid progression of symptoms, difficulty breathing, muffled voice, sensation of tightness in the throat, drooling, stridor, signs of dehydration, and the sniffing position

Work-up

- Begin with simultaneous assessment of the airway and patient's general appearance, followed by direct visualization of the pharynx and pharyngeal structures.
- If unable to visualize source, and symptoms are severe, consider nasopharyngoscopy or laryngoscopy with setup for rescue airway (i.e. cricothyrotomy, due to risk of laryngospasm) to evaluate for infectious or structural causes of obstruction.
- If patient is stable and there is concern for epiglottitis, consider plain film for screening, looking for "thumb sign".
- CT is most useful in a child or adult with signs and symptoms of a deep neck infection and whose airway is secure, although a lateral neck plain film is a sensitive test for the disease in lower-risk patients.
- Assess HIV status and immunization status. Assess 4 Centor criteria for GAS (history of fever, tonsillar exudates, tender anterior cervical adenopathy, absence of cough).
- Consider rapid strep test or Monospot test if clinically relevant.
- Symmetrical distribution of tonsillar erythema or exudates without airway involvement suggests acute tonsillitis
- Unilateral swelling and contralateral uvular deviation suggests peritonsillar abscess

- Involvement of entire oropharyngeal area suggests pharyngitis
- Significant symptoms with no clear oropharyngeal pathology on exam suggests hypopharynx etiology, especially epiglottitis

Empiric Management

- Manage airway compromise or impending airway compromise first.
- Titrate analgesic meds (i.e. topical anesthetic sprays, APAP, NSAIDS, opioids) to enable patient to maintain nutrition and hydration balance. Consider corticosteroids for moderate to severe pharyngitis.
- In setting of clinical pharyngitis, a fluctuant unilateral peritonsillar mass should be drained when possible.
- Antibiotics are often used in cases of unilateral swelling and redness that appears not to be fluctuant (i.e. "peritonsillar cellulitis)
- Patients with severe, systemic illness should receive antibiotic coverage for streptococcal and anaerobic bacteria
- With the exception of gonococcal disease and the aforementioned cases, evidence suggests that acute pharyngitis should not typically be treated with antibiotics as the majority of cases are viral in origin, and suppurative complications following strep infections are both easily treated and rare in industrialized nations (i.e. use antibiotics in endemic setting of rheumatic fever). Additionally, the use of antibiotics has not been shown to be superior to NSAIDS in reducing pain. However, guidelines in the U.S. still recommend a combination of clinical assessment and bacteriologic testing with the goal of treating with antibiotics when GAS is identified or strongly suspected.
- Educate patients on 1) the self-limited nature of infectious pharyngitis, 2) the lack of symptomatic benefit with antibiotics, and 3) the potential harm of antibiotics (individual and population resistance, fungal infections in women, rashes, GI effects, recurrence of pharyngitis, and occasionally dangerous allergic reactions).

Disposition

- With mild symptoms of pharyngitis and no airway compromise, provide symptomatic treatment and education, d/c with f/u as needed. Consider antibiotics only if high likelihood of GABHS in endemic, epidemic setting of rheumatic fever.
- If moderate illness or unable to determine source, admit and consider advanced imaging and/or empiric steroids and antibiotics.
- If severe illness and signs of airway compromise, provide disease-focused therapy and admit. Consider nasopharyngoscopy and/or advanced airway management if needed. Provide empiric steroids and antibiotic coverage.