



Pharyngitis Syndromes Including Group A Strep

Karen C. Bloch, MD, MPH, FIDSA, FACP

Professor, Division of Infectious Diseases
Vanderbilt University Medical Center

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Disclosures of Financial Relationships with Relevant Commercial Interests

- None

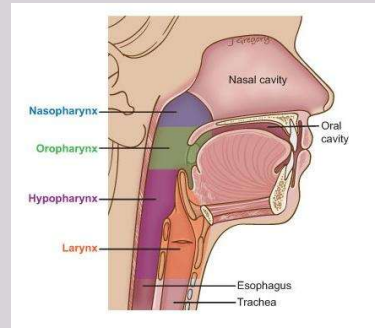


Think Like A Realtor



Location
Location
Location

Pharyngitis



- Micro-neighborhoods
- Regional differences

SEE ENLARGED SLIDE FOLLOWING ENTIRE PRESENTATION

Question #1

- 38-year-old female presents with a 1 day of sore throat and fever
- Childhood history of anaphylaxis to penicillin
- Physical exam
 - T=102.3
 - HEENT-tonsillar erythema & petechiae
 - Neck-Tender bilateral anterior LAN
- Labs:
 - Rapid strep antigen test **negative**



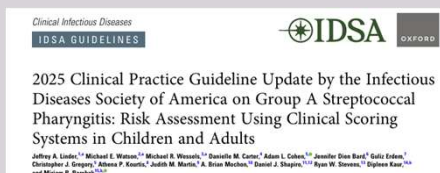
Question #1

What is the most appropriate antibiotic treatment?

- A. Cephalexin
- B. None
- C. Doxycycline
- D. Clindamycin
- E. Levofloxacin

Group A streptococcus

- AKA *Streptococcus pyogenes*
- GAS accounts for 5-15% sore throats in adults
- Usually **self-limited** infection in adults (even untreated)



Differentiating Pharyngitis

GAS



Viral Pharyngitis



- Throat pain
- Fever
- Tonsillar erythema
- Tonsillar exudates
- Other symptoms
- Ulcerative stomatitis
- Hoarseness

Streptococcal Clues



How Specific are Clinical Findings?

Modified CENTOR score

- Can't cough
- Exudate
- Nodes
- Temperature
- OR age <15 yr (+1) or >44 years (-1)

Points	Strep Probability
0 or 1	< 10%
2	11 -17%
3	28 -35%
4 or 5	35-50%

2025 IDSA guidelines recommend:

- Clinical scoring systems are most useful in identifying low-risk patients who don't require testing
- High-risk individuals should be tested even in low scores
 - Exposure to household contact
 - Prior RF
 - Signs or symptoms of iGAS

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Laboratory Diagnosis

- Adults:
 - RADT: if negative, culture or NAAT if high risk or high score
 - NAAT: if negative, no culture needed
- ASO titer or Anti-DNAse B antibodies
 - helpful in diagnosis of rheumatic fever and post-streptococcal glomerulonephritis, but **not** for strep pharyngitis.



Treatment for GAS Pharyngitis

• First Line:

- Oral Penicillin or amoxicillin x 10 days

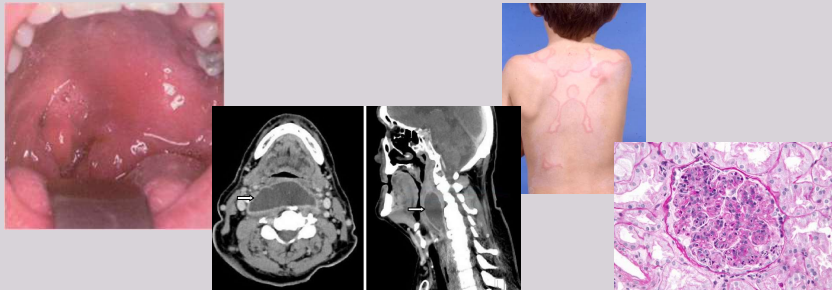


PCN Allergic:

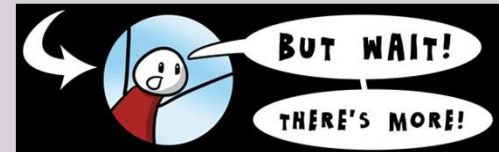
- Mild: cephalosporin (1-3rd) x 10 days or macrolides (+/-) x 3 days
- Anaphylaxis/severe:
 - Clindamycin
 - Azithromycin

Secondary Complications

- Infectious complications
- Immunologic complications



Pharyngitis and...



Pharyngitis & Rash

- Young adult with fever, sore throat, tonsillar exudate, scarletinoform rash BUT...**Negative RADT and culture**

Arcanobacterium haemolyticum

- Gram positive rod
- Most common in adolescents
- Rash in >50%, mimics strep but does not peel
- Rarely life-threatening sequelae



Pharyngitis & Rash

- Acute HIV
- Secondary syphilis

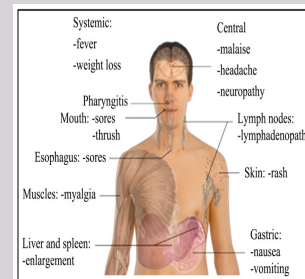
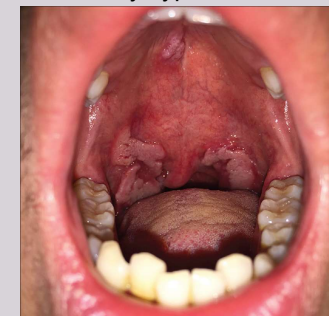


Figure 1 Main symptoms of acute HIV infection



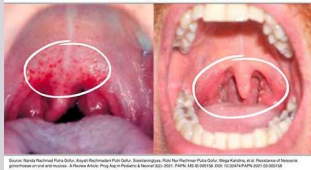
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Pharyngitis after Receptive Oral Intercourse

Neisseria gonorrhoeae

- Highest risk MSM
- Often asymptomatic

Gonorrhea pharyngitis (sore throat)



Herpes Simplex Virus

- HSV-1 or HSV-2
- Usually with initial infection
- Tonsillar vesicles
- Labial or perioral lesions



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Pharyngitis & Conjunctivitis

- College freshman with sore throat, fever, and conjunctivitis
- Roommate and 3 others in her dorm with similar syndrome



Adenovirus

Epidemics in group living situations—barracks, dorms, camps, etc.

Pharyngitis and Vesicles

- 35-year-old man with sore throat, low grade fever, and lesions on palms & soles. His 3-year-old son is sick with a similar illness.

Hand, Foot, and Mouth Disease

- Caused by enteroviruses (most common Coxsackie virus)
- More common in kids (often serve as vector)



Oral Lesions Due to Mpox

- Oral lesions often pre-date skin findings
- Seen in up to 25% of cases of mpox



Question #2

- A 22-year-old woman presents with 24hr of fever and odynophagia
- She works at a vineyard in Napa Valley and last week took part in the grape harvest. She admits to sampling the grape must.
- Her cat recently had kittens



Question #2

Physical Exam:

- Ill appearing
- T=102.4, HR=122, BP=97/52
- Right tonsil swollen and erythematous
- Right suppurative lymph node tender to palpation



Tunçer, et al (2013).c. APMIS : acta pathologica, microbiologica, et immunologica Scandinavica. 122. 10.1111/apm.12132.

Question #2

What is the most likely cause of this patient's illness?

- A. Toxoplasmosis
- B. Bartonellosis (Cat Scratch Fever)
- C. Tularemia
- D. Epstein Barr virus
- E. Scrofula (mycobacterial lymphadenitis)

Oropharyngeal Tularemia

- Uncommon in the US
- Transmission through ingestion (or rarely inhalation)
 - Inadequately cooked game
 - Contaminated water
 - Rodent contamination
- Exudative tonsillitis, **suppurative LAN**
- Treatment: gentamicin (severe cases), quinolone, or doxycycline (if milder)

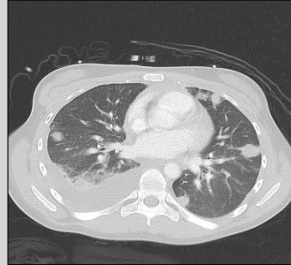


Pharyngitis and Chest Pain

- 20-year-old college student with sore throat and fever. Despite oral amoxicillin, he develops new onset of cough and pleuritic CP; CT below

Lemierre Syndrome

- Septic phlebitis of internal jugular vein
- Often follows GAS pharyngitis or mono (EBV)
- Classic cause is *Fusobacterium necrophorum*
- Causes septic pulmonary emboli



Pharyngitis in Immunocompromised Patients

- 69-year-old man on infliximab presents with 2 months of painful oral ulcer and 20 lb. wt loss

Oropharyngeal Histoplasmosis

- Can mimic oral malignancy
- Denotes disseminated disease



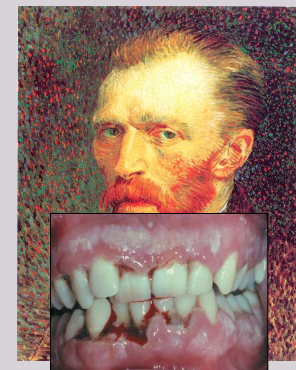
Extra-Tonsillar Infections: 1

- Epiglottitis
 - Fever, sore throat
 - Hoarseness, drooling, muffled voice (hot potato voice), stridor
 - Examine with care!
 - Lateral neck x-ray: Thumb sign
 - *H. influenzae* type B, pneumococcus



Extra-Tonsillar Infections: 2

- Vincent Angina
 - AKA Trench mouth
 - AKA acute necrotizing ulcerative gingivitis
 - Bad breath (mixed anaerobes)
 - Painful
 - Sloughing of gingiva



Extra-Tonsillar Infections: 3

- Ludwig Angina
 - Cellulitis of floor of the mouth
 - Often starts with infected molar
 - Rapid spread with potential for airway obstruction
 - Fevers, chills, drooling, dysphagia, muffled voice, woody induration of neck
 - Mixed oral organisms



Question #3

- A 32-year-old woman is seen for a bad sore throat for 4 days
- Recently returned from her sister's wedding in Kazakhstan
- She c/o odynophagia and a low-grade fever
- T 100.2F; P 126; BP 118/74
- HEENT: Submandibular swelling with gray exudate coating posterior pharynx
- An S3 gallop is heard
- EKG shows 1st degree AV nodal block, QT prolongation, and ST-T wave changes



Question #3

What is the most likely diagnosis?

- A. Streptococcal pharyngitis
- B. Kawasaki disease
- C. Vincent angina
- D. Diphtheria
- E. Candida

Buzz Words and Visual Associations

Bull neck:



Grey pseudomembrane: extends onto palate or uvula; bleeds when scraped



Other Clues

- Location, location, location
 - Almost unheard of in developed countries (vaccination works!)
- Sore throat and myocarditis (~25%)
- Sore throat and neuropathies (~5%)
- Sore throat and cutaneous ulcer



Noninfectious Mimics

- PFAPA (periodic fever, aphthous stomatitis, pharyngitis, and adenitis)
- Still's disease
- Lymphoma
- Kawasaki disease
- Behçet disease's



THANK
YOU!

Karen.bloch@vumc.org