"Help! My throat is on Fire!" Evaluating Throat Pain

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Disclosure

- None

Fourth Annual ENT for the PA-C | April 24-27, 2014 | Pittsburgh, PA

Learning Objectives

Identify the history and clinical exam features of diseases involving the tonsils and adenoids.

2. Develop an evidence-based management plan, and recognize when to refer for tonsillectomy based on AAO-HNSF Clinical Guidelines.

3. Discuss the role of LPR (laryngopharyngeal reflux disease), its proper diagnosis and treatment.

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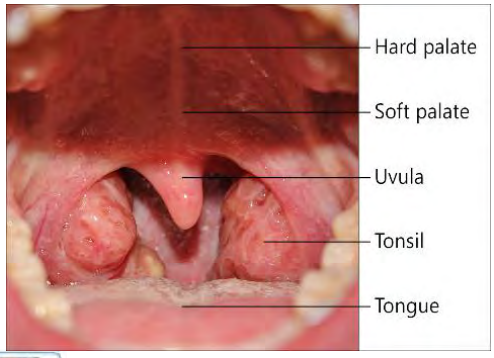
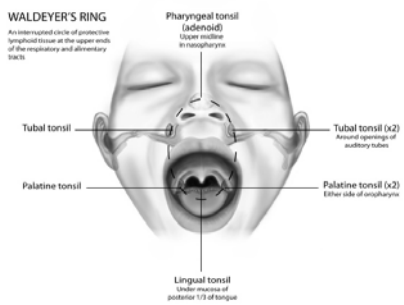
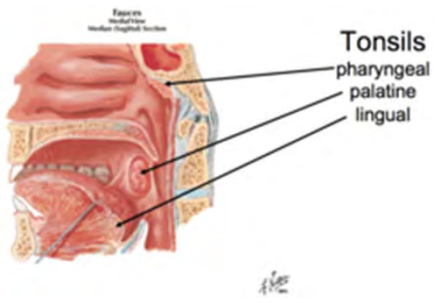
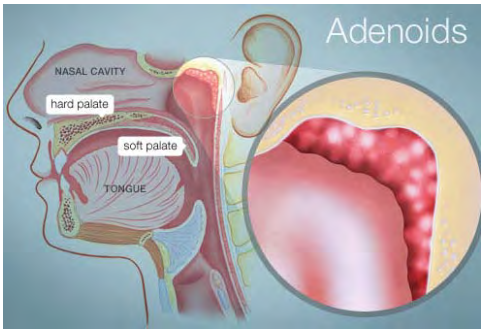
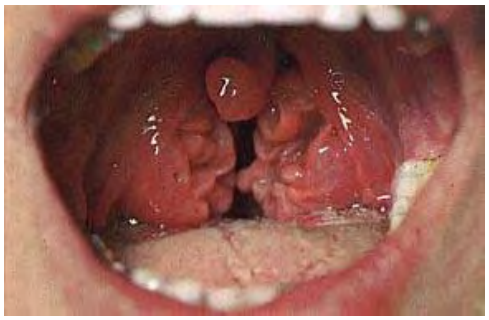




Otolaryngology: Waldeyer's Ring
Toronto Notes 2010 OT40
Photoshop CS4







http://www.khsclinic.com/actul.jpg

Why do patients visit doctor?

- Acute infections
- Concern for tonsillitis
- Chronic throat pain

What is an infection?

- A sore throat, plus
- Temp > 38.3

OR

- (+) cx group A beta-hemolytic streptococcus

OR

- Tender cervical lymph nodes > 2 cm

OR

- Tonsillar exudate

Types of tests

- Throat culture on sheep-blood agar plate
- Gold standard
- 90-95% sensitive for detection of GAS pharyngitis
- Must swab tonsil

Rapid antigen detection test

- Rapid strep test
- Allows initiation of antibiotics earlier
- Older latex agglutination method – insensitive
- Enzyme immunoassay – highly specific

Anti-strep antibody test

- Not useful for diagnosis of acute pharyngitis
- Marker of previous infection
- Reaches max level at 3-8 weeks post infection

- Helpful in diagnosis of sequelae of GAS
  - Acute rheumatic fever
  - Acute glomerulonephritis

Viral etiology

- Cough
- Rhinorrhea
- Hoarseness
- Oral Ulcers

- Vast majority of people have viral causes

Differential diagnosis

- Adenovirus
- HSV 1 and 2
- Coxsakie virus
- Rhinovirus
- Coronavirus
- Influenza A and B
- EBV
- Group A streptococcus

"Strep" throat

- 20-30% of children's throat infections
- 5-15% of adult acute pharyngitis
- Most common bacterial cause of acute pharyngitis
- Has severe sequelae, albeit rare
  - Acute rheumatic fever

Table 2. Antibiotic Regimens Recommended for Group A Streptococcal Pharyngitis

Drug, Route	Dose or Dosage	Duration of Quantity	Recommendation Strength, Quality[a]	Reference(s)
For individuals without penicillin allergy				
Penicillin V, oral	Children: 250 mg twice daily or 3 times daily; adolescents and adults: 250 mg 4 times daily or 500 mg twice daily	10 d	Strong, high	[125, 126]
Amoxicillin, oral	50 mg/kg once daily (max = 1000 mg); alternate: 25 mg/kg (max = 500 mg) twice daily	10 d	Strong, high	[88–92]
Benzathine penicillin G, intramuscular	<27 kg: 600 000 U; ≥27 kg: 1 200 000 U	1 dose	Strong, high	[53, 125, 127]
For individuals with penicillin allergy				
Cephalexin,[b] oral	20 mg/kg/dose twice daily (max = 500 mg/dose)	10 d	Strong, high	[128–131]
Cefadroxil,[b] oral	30 mg/kg once daily (max = 1 g)	10 d	Strong, high	[132]
Clindamycin, oral	7 mg/kg/dose 3 times daily (max = 300 mg/dose)	10 d	Strong, moderate	[120]
Azithromycin,[c] oral	12 mg/kg once daily (max = 500 mg)	5 d	Strong, moderate	[97]
Clarithromycin,[c] oral	7.5 mg/kg/dose twice daily (max = 250 mg/dose)	10 d	Strong, moderate	[134]

Abbreviation: Max, maximum.

[a] See Table 1 for a description.

[b] Avoid in individuals with immediate type hypersensitivity to penicillin.

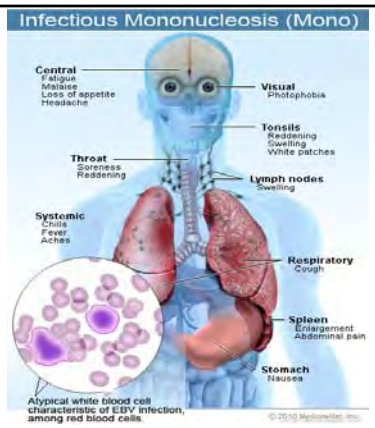
[c] Resistance of GAS to these agents is well-known and varies geographically and temporally.

Treatment

- Penicillin V for 10 days
- Amoxicillin 50 mg/kg for 10 days
- Acetaminophen or NSAID

Mononucleosis

- Epstein-Barr Virus
- Spread by saliva
- Incubation period is 4-8 weeks
- Fever, fatigue, sore throat, lymphadenopathy
- Peak incidence is 15-17 year olds



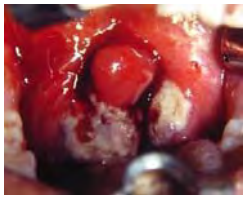
http://www.medicinenet.com/infectious_mononucleosis/page2.htm

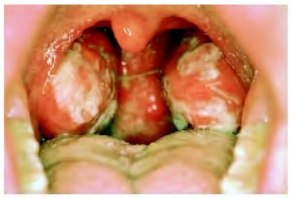
Symptoms

- Initially:
  - Malaise and fatigue
  - Loss of appetite
  - Chills
- After 3 days
  - Severe sore throat
  - Persistent fever
  - Lymphadenopathy

Tonsils in Mononucleosis

- Erythema
- Edema





http://www.ghorayeb.com/TonsilDisease.html
http://www.healthofchildren.com/I-K/Infectious-Mononucleosis.html

Mono testing

- Lymphocyte predominance
- Atypical appearance – smear
- Monospot
- Heterophile antibody test

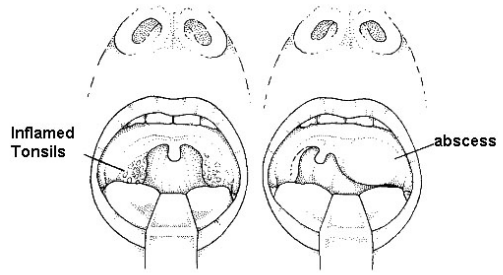
Treatment

- Expectant treatment
- Antivirals have no effect
- Steroids for tonsil edema
- Avoid contact sports

Peritonsillar abscess

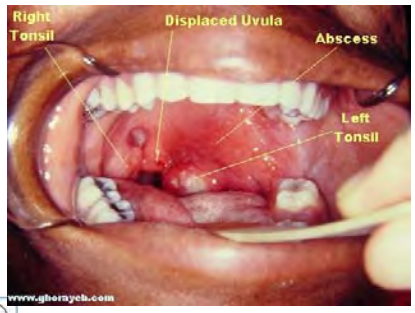
- Complication of acute tonsillitis
- Unilateral pain
- Trismus
- "Hot- potato" or muffled voice
- Unilateral otalgia
- 2-5 day time course

Peritonsillar abscess

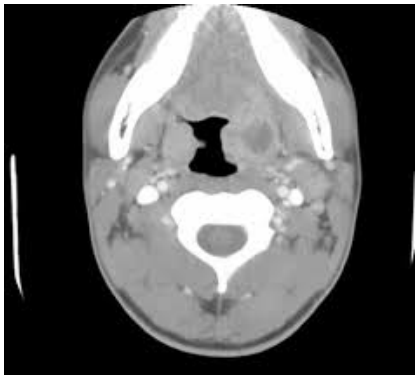


http://wikieducator.org/images/9/95/Tonsillitis.jpg

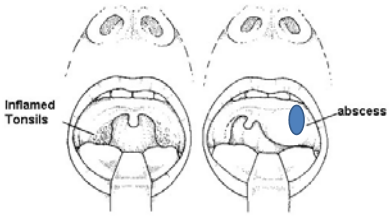
Peritonsillar abscess



CT findings of peritonsillar abscess



Peritonsillar abscess I and D



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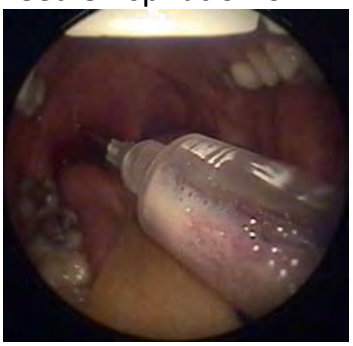
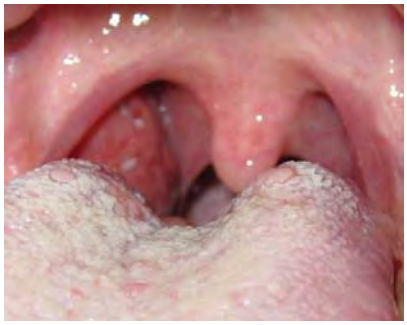
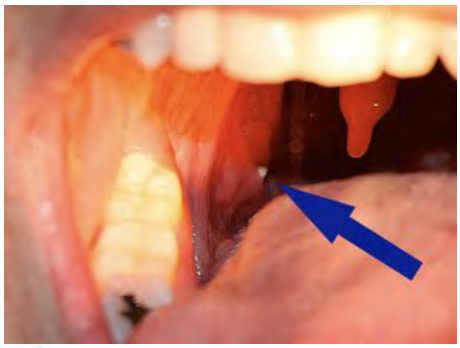
Needle Aspiration of PTA

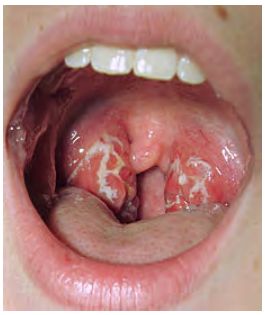


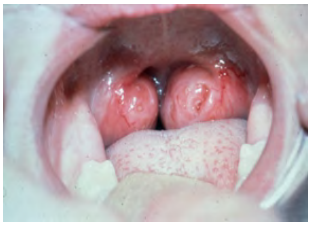
Tonsil stone

- Tonsilloliths
- Foul smelling
- Hard objects
- Feels like something is stuck
- Contribute to bad breath
- Patients will remove them on their own

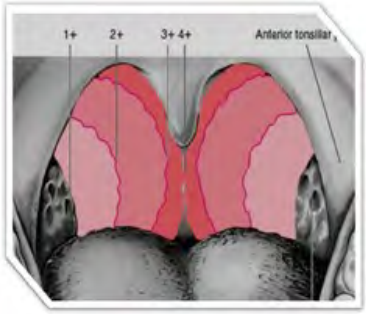








Tonsil size



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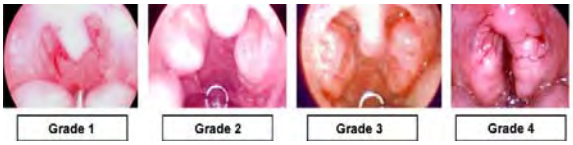


Karen A. Waters, Alan T.L. Cheng. Adenotonsillectomy in the context of obstructive sleep apnoea. Paediatric Respiratory Reviews. Volume 10, Issue 1, March 2009, Pages 25–31

When do tonsils need to be removed?

Adenotonsillectomy indications

- Recurrent acute infections
- Chronic infection
- Tonsil stones – Halitosis
- Asymmetric tonsils
- Obstruction
- Speech abnormalities

Guidelines for surgery

- Frequency of infections
- Sleep disordered breathing
- Perioperative care
- Postoperative care

What is an infection?

- A sore throat, plus
- Temp > 38.3

OR

- (+) cx group A beta-hemolytic streptococcus

OR

- Tender cervical lymph nodes > 2 cm

OR

- Tonsil exudate

Recurrent acute infections

- 7 infections in one year
- 5 infections a year for two years in a row
- 3 infections a year for three years in a row

Recurrent infections

- Episode of peritonsillar abscess
  - One : relative indication
  - Two : near absolute indication

Sleep disordered breathing

- Important to investigate
- Consider comorbid conditions
- Growth retardation
- Poor school performance
- Enuresis
- Behavioral problems

Sleep study?

- Usually not needed
- Does not establish effects of sleep on child
- Use a sleep study in marginal

Adenoid hypertrophy

- Nasal obstruction
- Recurrent infection
- Hyponasal voice
- Recurrent ear infections

Perioperative care

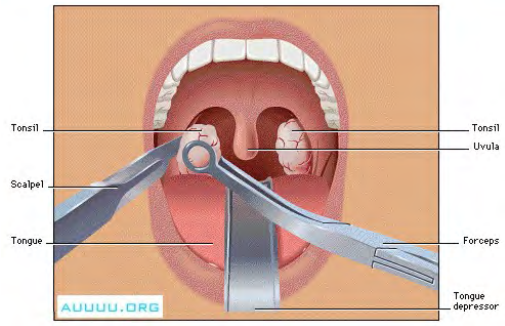
- Single dose of IV steroids
- Perioperative antibiotics are not needed
- Educate importance of pain control

Codeine after tonsillectomy

- FDA safety communication 8/16/2012
- Unexpected deaths
- Ultra-rapid metabolizers
- Codeine is converted to morphine in liver
- Rapid metabolizers - high levels of morphine
- Incidence
- 1-7% general population
- Use acetaminophen and ibuprofen instead

Tonsillectomy

- General anesthesia
- 15-30 minute surgery
- Transoral access
- Outpatient procedure



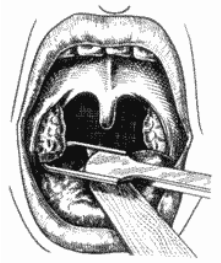
Risks of tonsillectomy

- Pain
- Recurrent bleeding

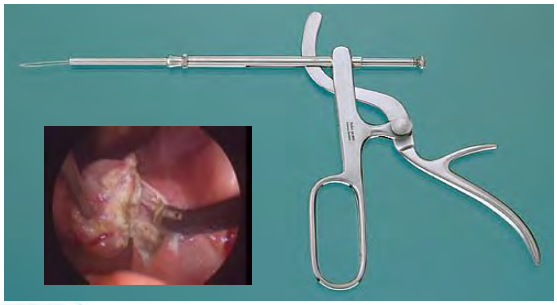
- Nasopharyngeal stenosis
- Velopharyngeal insufficiency

Technique

- Bovie
- Laser
- Coblator
- Knife



Techniques



Post tonsillectomy care

- Pain control
- Diet modification
- Avoid exertion

Patients with "throat symptoms"

- Throat has complex innervation
- Patients may experience of multitude of symptoms
- Differentiating abnormal from normal is challenging

The throat is difficult to examine…

www.flickr.com/photos/ohliger2/5010416876/

Everyone's fear

www.whoateallthepies.tv/category/funnies/page/4

Everyone's fear

Cancer

http://www.therealstevegray.com/wp-content/uploads/David-Letterman-Michael-Douglas-on-Having-Throat-Cancer-.png

Cancer

- Incidence of cancer associated with globus is very rare

Tsikoudas A, Ghuman N, Riad MA. Globus sensation as early presentation of hypopharyngeal cancer. Clin Otolaryngol 2007; 32:452–456.

Imaging

- Plain film
- CT Neck
- MRI Neck
- Barium Swallow
- Esophagogram

For the most part…

- Imaging is unnecessary
- Unhelpful
- Responsible for "incidentalomas"

Imaging is helpful if

- Pain
- Extensive tobacco or alcohol history
- Unilaterality
- Otalgia
- Weight loss
- Neck mass

If there is concern

- CT Neck with contrast should be sufficient
- Barium swallow/esophagogram
  Only in the setting of dysphagia

Management

- History
- Physical

Laryngopharyngeal reflux

- Form of extraesophageal reflux disease
- Also known as “LPR”
- Aka “silent reflux”

Physical Exam

- Complete head and neck examination
- Mirror Laryngoscopy
- Flexible Laryngoscopy

Reflux symptom index

Table 1. *The Reflux Symptom Index (RSI)*

Within the last month, how did the following problems affect you? *Circle the appropriate response.*	0 = No Problem 5 = Severe Problem					
1. Hoarseness or a problem with your voice	0	1	2	3	4	5
2. Clearing your throat	0	1	2	3	4	5
3. Excess throat mucus or postnasal drip	0	1	2	3	4	5
4. Difficulty swallowing food, liquids, or pills	0	1	2	3	4	5
5. Coughing after you ate or after lying down	0	1	2	3	4	5
6. Breathing difficulties or choking episodes	0	1	2	3	4	5
7. Troublesome or annoying cough	0	1	2	3	4	5
8. Sensations of something sticking in your throat or a lump in your throat	0	1	2	3	4	5
9. Heartburn, chest pain, indigestion, or stomach acid coming up	0	1	2	3	4	5
	TOTAL					

Journal of Voice, Vol. 16, No. 2, 2002

Reflux finding score

Subglottic Edema	2 = present 0 = absent	
Ventricular Obliteration	2 = partial 4 = complete	
Erythema/Hyperemia	2 = arytenoids only 4 = diffuse	
Vocal Fold Edema	1 = mild 2 = moderate 3 = severe 4 = polypoid	
Diffuse Laryngeal Edema	1 = mild 2 = moderate 3 = severe 4 = obstructing	
Posterior Commissure Hypertrophy	1 = mild 2 = moderate 3 = severe 4 = obstructing	
Granuloma/Granulation	2 = present 0 = absent	
Thick Endolaryngeal Mucus	2 = present 0 = absent	
	Total:	

Source: Center for Voice Disorders of Wake Forest University. Reprinted with permission.

"Your throat looks red & inflamed"

- Be careful what you tell patients
- Will ask other medical providers
- Can cause stress for patients

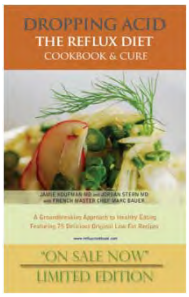
Management of these patients

Patient education

- "But I don't have reflux…"
- Take extra time to explain disease process
- Dietary changes
- Not just – "Take your prilosec"

Dietary changes

- Provide a list of foods for patients to avoid
- Discuss alternatives
- Size and time of meal is critical



Medications

- Twice daily PPIs – historically
- Now PPIs do have longer half life
- Nightly H_2 blocker

Time for response

- Wait at least three to six months
- Refractory – consider other etiologies
- Refer to other specialists if necessary

Learning Objectives

- Identify the history and clinical exam features of diseases involving the tonsils and adenoids.
- 2. Develop an evidence-based management plan, and recognize when to refer for tonsillectomy based on AAO-HNSF Clinical Guidelines.
- 3. Discuss the role of LPR (laryngopharyngeal reflux disease), its proper diagnosis and treatment.