

Common Infections Core Curriculum Module Summary

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PHARYNGITIS

Modified Centor Score – Estimates likelihood of streptococcal pharyngitis and need for antibiotics in acute pharyngitis

1 point each: fever >30°C, tender anterior cervical lymphadenopathy, tonsillar exudate / swelling, absence of cough

Some physicians also use age criteria: 3-14 years add 1 point, 15-44 years add 0 points, >45 years subtract 1 point

→ Score 0-1: ∅ swab, ∅ treatment, Score 2-3: swab & Tx if swab (+), Score 4: swab & Tx

Differentiating Strep Throat vs. Mononucleosis

Strep Throat	+ fatigue, (-) monospot, + nodes	
Mononucleosis	atypical lymphocytosis, ++ fatigue, ± hepatomegaly, ± liver enzymes, + monospot (*), ++ nodes, ± splenomegaly	(*) Note that (+) monospot in mononucleosis may be delayed 1-2 weeks

Management (For dosing & 3rd line drugs refer to Common Infections E-Module)

Adult 1st line: Penicillin V, **2nd line:** Erythromycin

Children 1st line: Penicillin V, Amoxicillin, **2nd line:** Erythromycin

Complications of Strep Throat

Bacteremia (R), cervical lymphadenitis, meningitis (rare), otitis media, peritonsillar abscess, pneumonia (rare), rheumatic fever, scarlet fever, sinusitis. *Note that treatment of strep throat does not prevent post-strep glomerulonephritis

SINUSITIS

Predictors of Sinusitis

- 1) Worsening symptoms after 5 days
- 2) + Nasal congestion / purulent discharge AND facial pain
- 3) Persistent URTI symptoms ∅ improvement after 10-14 d
- 4) Fever, maxillary toothache & facial swelling
- 5) Negative response to OTC meds

Acute vs. Chronic vs. Recurrent Sinusitis

Acute Sinusitis ≤ 4 weeks

Chronic Sinusitis > 12 weeks

Recurrent Sinusitis ≥ 4 episodes / yr, ∅ symptoms in-between

Diagnostic Criteria and Management of Bacterial Sinusitis

Major (5)

1) Facial congestion, 2) Facial pain / pressure; worse when bending forward, 3) Nasal congestion, 4) Purulent nasal discharge, 5) Postnasal drip

Minor (6)

1) Cough, 2) Dental pain, 3) Ear pain / pressure or fullness 4) Fatigue, 5) Halitosis, 6) Headache

Strongly suggestive of bacterial sinusitis: ≥ 2 major criteria OR 1 major and > 2 minor criteria

Suggestive of bacterial sinusitis: ≥ 1 major criteria OR ≥ 2 minor criteria

Notes: • The presence of facial pain / pressure and fever (both major criteria) each require that a 2nd major criterion is present.

• Consider bacterial sinusitis when signs / symptoms have been present for ≥ 10 days or worsen within 10 days.

Tx: Amoxicillin, or if penicillin allergic give Clarithromycin or Azithromycin

Complications of Acute Rhinosinusitis

Cavernous sinus thrombosis, chronic sinusitis, meningitis, (peri)orbital cellulitis / abscess

Referrals

Referral to **otolaryngologist** for: anatomical anomalies, 4+ episodes/yr bacterial sinusitis, chronic sinusitis unresponsive to Tx

Red Flags (require urgent referral): Abnormal vision (diplopia, blindness, ↓ visual acuity), change in mental status, extraocular muscle dysfunction, meningitis, periorbital or forehead swelling / edema

ACUTE OTITIS MEDIA

Management

<6 Months	Start <u>antibiotics</u> if: Child is <6 months, child looks toxic, follow-up cannot be assured, severe otalgia, temp >39°C
>6 Months	<u>Watchful waiting</u> 48-72 hours (+ may offer deferred Rx) if: Mild signs & symptoms + follow-up assured
Rx	<ul style="list-style-type: none"> • High spontaneous recovery (80-90%). Treat earache/fever with acetaminophen/ibuprofen/other analgesics • 1st Line: Amoxicillin, 2nd Line: Amoxicillin / Clavulanate or Cefprozil (see module for dosing & 3rd line drugs) • Ciprodex otic drops for chronic TM perforation / t-tube ventilation (presentation = chronic painless discharge)
Reassess	∅ improvement / worsening of symptoms, new symptoms (i.e. rash, drowsiness, difficulty breathing, vomiting)

BRONCHITIS

Differentiating Bronchitis vs. Pneumonia

Bronchitis	Afebrile, patient does not appear as sick	
Pneumonia	± Consolidation on X-Ray, ± tachypnea, ± tachycardia, ↑ WBC, ± dullness to percussion	<i>Note: Sputum culture often unhelpful unless considering TB or in special population (i.e. immunocompromised)</i>

Management

Supportive, fluids, rest, analgesics, antitussives, opioid-based cough suppressants (limit duration), bronchodilators

Antibiotics	Not routinely used because 90% viral etiology. Consider antimicrobial therapy if ↑ risk significant complications (i.e. elderly, comorbidities) or pneumonia/pertussis suspected.
Prevention	Frequent hand washing, smoking cessation, irritant exposure avoidance

URINARY TRACT INFECTION

Investigations

Clinic	<u>Urine Dipstick</u> → WBC, RBC, Nitrites → If 2+ of dysuria, leukocytes, nitrites → Treat without culture
Laboratory	<u>Urine Culture</u> → Most common bacteria associated with UTI: "KEEPS" (90% E. coli)

Differentiating Uncomplicated vs. Complicated UTI

Uncomplicated	Diaphragm/spermicide use, family history of UTI, frequent sexual intercourse, infrequent voiding, new sexual partner within last year, previous UTIs, young ♀
Complicated	Anatomical anomalies, immunocompromized, instrumentation (i.e. catheter, nephrostomy tube, urologic procedure), ♂

Differentiating Clinical & Laboratory Features of UTI vs. Pyelonephritis

UTI	Pyelonephritis	Both
Absence of flank pain, afebrile, normal WBC, patient appears less sick	± CVA Tenderness, ± N/V, ↑ WBC	Dysuria, frequency, ± hematuria, suprapubic pain, urgency

Management

Asymptomatic Bacteriuria	Screen <u>only</u> in pregnancy or post-op GU procedures. Do not treat elderly with asymptomatic bacteriuria. If UTI suspected, culture before Rx.
Uncomplicated UTI ♀ >12 yrs	<u>1st Line</u> : Nitrofurantoin or TMP-SMX (<i>see module for dosing & 2nd/3rd line drugs</i>)
Complicated UTIs	Same drugs but ↑ treatment duration (<i>see module for details</i>)
Prevention / Non-Pharmacologic	Avoiding spermicide-containing contraception, post-coital micturition, hygiene practices, frequent urination, cranberry juice / tablets
Referrals	Refer for: persistent hematuria following resolution of UTI, recurrent UTI not managed with prophylactic antibiotics, anatomic anomalies (i.e. prolapse, stricture)

VAGINITIS

Differentiating Yeast Vaginitis (YV) vs. Bacterial Vaginosis (BV)

YV : Associated itchiness, thick/white cottage cheese-like discharge	BV : Associated odour, grey/thin discharge
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Investigations & Management

Yeast Vaginitis	Vaginal swab → Rx Vaginal preparations of clotrimazole or miconazole or oral fluconazole	
BV	Vaginal swab (*) or KOH Whiff Test → Rx Metronidazole PO or intravaginal metronidazole/clindamycin	
Trichomonas	Vaginal Swab (Diamond's Medium) → Rx Metronidazole PO	
Chlamydia	Cervical swab → Rx Azithromycin PO	<i>* Rx for both Chlamydia and Gonorrhea at same time because often co-infected</i>
Gonorrhea	Cervical swab → Rx Ceftriaxone IM + Azithromycin PO	

RESOURCES

Please review the resources listed below on **The Hub** – the online study guide for the third year medicine clerkship course in Family and Community Medicine at the University of Toronto.

Temp. Measurement in Peds (in "Fever"): <http://thehub.utoronto.ca/family/wp-content/uploads/2013/07/Temperature-measurement-in-paediatrics-1.pdf>