

1. Define diagnostic reasoning

Reflective thinking because the process involves questioning one's thinking to determine if all possible avenues have been explored & if the conclusions that are being drawn are based on evidence.

Seen as a kind of critical thinking.

2. What is subjective data?

Anything the patient tells you or complains of regarding their symptoms

Chief complaint

HPI

ROS

3. What is objective data?

Anything YOU can see, touch, feel, hear, or smell as part of your exam

Includes lab data, diagnostic test results, etc.

4. Identify components of HPI

Specifically related to the chief complaint only

Detailed breakdown of CC

OLDCARTS

5. Describe the differences between medical billing & medical coding.

Medical billing: process of submitting & following up on claims made to a payer in order to receive payment for medical services rendered by a healthcare provider

Medical coding: the use of codes to communicate with payers about which procedures were performed & why.

6. Compare & contrast the two coding classification systems that are currently used in the US healthcare system.

ICD: International classification of disease codes are used to provide payer info on necessity of visit or procedure performed. Shorthand for pt's dx.

CPT: common procedural terminology codes offer the official procedural coding rules & guidelines required when reporting medical services & procedures performed by physician & non-physician providers. Must have corresponding ICD.

7. How do specificity, sensitivity, & predictive value contribute to the usefulness of diagnostic data?

Specificity: ability of a test to correctly detect a specific condition. If a pt has a condition but test is negative, it is a false negative. If pt does NOT have condition but test is

positive, it is false positive.

Sensitivity: test that has few false negatives. Ability of a test to correctly identify a specific condition when it is present. The higher the sensitivity, the lesser the likelihood of a false negative.

Predictive value: The likelihood that the pt actually has the condition & is, in part, dependent upon the prevalence of the condition in the population. If a condition is highly likely, the positive result would be more accurate.

Diagnostic tests can be used to confirm or rule out hypotheses.

Diagnostic tests may be used to screen for conditions.

Diagnostic tests may be used to monitor the progress in managing a chronic condition.

8. Discuss the elements that need to be considered when developing a plan.

Pt's preferences & actions
Research evidence
Clinical state/circumstances
Clinical expertise

9. Describe the components of medical decision making in E&M coding.

Risk, data, diagnosis

The more time & consideration involved in dealing with a pt, the higher the reimbursement from the payer.

Documentation must reflect MDM

10. Correctly order the E&M office visit codes based on complexity from least to most complex.

New pt:

1. Minimal/RN visit: 99201
2. Problem focused: 99202
3. Exp&ed problem focused: 99203
4. Detailed: 99204
5. Comprehensive: 99205

Established pt:

1. Minimal/RN visit: 99211
2. Problem focused: 99212
3. Exp&ed problem focused: 99213
4. Detailed: 99214
5. Comprehensive: 99215

11. The 5 key components of a comprehensive treatment plan are:

1. Diagnostics
2. Medication
3. Education
4. Referral/consultation
5. Follow-up planning

12. Define the components of a SOAP note.

S: subjective (what the pt tells you)

CC

HPI

PMH

Fam Hx

Social Hx

ROS

O: objective (what you can see, hear, feel on exam)

Physical findings

Vital signs

General survey

HEENT

Etc...

A: assessment

Global assessment of pt including differentials in order from most to least likely

Combination of subjective & objective info

List of dx addressed & billed for at the visit

P: plan

What you will Rx

When to come back

Diagnostic tests

Pt education

13. Discuss minimum of three purposes of the written history & physical in relation to the importance of documentation.

Important reference document that gives concise info about the pt's hx & exam findings

Outlines a plan for addressing issues that prompted the visit. Info should be presented in a logical fashion that prominently features all data relevant to the pt's condition.

Is a means of communicating info to all providers involved in pt's care

Is a medical-legal document

Is essential in order to accurately code & bill for services

14. Why does every procedure code need a corresponding diagnosis code?

Diagnosis code explains the necessity of the procedure code.

Insurance won't pay if they don't correspond.

15. What are the three components required in determining an outpatient, office visit E&M code?

Plan of service

Type of service

Patient status

16. Correctly ID a pt as a new or established given historical info.

Pt status: whether or not pt is new or established.

New: has not received professional service from provider in same group within past 3 years.

Established: has received professional service from provider in same group in last 3 years.

17. What does a well-rounded clinical experience mean?

Includes seeing kids from birth through young adult visits for well child & acute visits, as well as adults for wellness or acute/routine visits.

Seeing a variety of pt's, including 15% of peds & 15% of women's health of total time in the program.

18. What are the maximum number of hours that time can be spent "rounding" in a facility?

No more than 25% of total practicum hours in the program

19. What are 9 things that must be documented when inputting data into clinical encounter logs?

Date of service

Age

Gender & ethnicity

Visit E&M code

CC

Procedures

Tests performed/ordered

Dx

Level of involvement

20. What does the acronym SNAPPS stand for?

S: summarize (present pt's H&P findings)

N: narrow (based on H&P, narrow down top 2-3 differentials)

A: analyze (compare/contrast H&P findings for each differential & narrow it down to most likely one)

P: probe (ask preceptor questions of anything you are unsure of)

P: plan (come up with specific management plan)

S: Self-directed learning (opportunity to investigate more about topics you are uncertain of)

21. What is the most common type of pathogen responsible for acute gastroenteritis?

Viral (can be viral, bacterial, or parasitic), usually norovirus

22. T/F

Assessing for prior antibiotic use is a critical part of the history in pt's presenting with diarrhea.

True

23. What is the difference between irritable bowel disease (IBD) & irritable bowel syndrome (IBS)?

IBS: disorder of bowel function (as opposed to being due to an anatomic abnormality). Changes in bowel habits (diarrhea, constipation, abd pain, bloating, rectal urgency w/diarrhea).

Symptoms fall into two categories: abd pain/altered bowel habits, & painless diarrhea. Usually pain is LLQ.

PE: normal except for tenderness in colon.

Labs: CBC, ESR. Most other labs & radiology/scopes are normal.

Dx made on careful H&P.

May be associated with nonintestinal (extra-intestinal) symptoms (sexual function difficulty, muscle aches/pains, fatigue, fibromyalgia, HAs, back pain, urinary symptoms). Not associated with serious medical consequences. Not a risk factor for other serious GI dz's.

Does not put extra stress on other organs.

Overall prognosis is excellent.

Major problem: changes quality of life.

Treatment: based on symptom pattern. May include diet, education, pharm (for mod-severe pt's)/other supportive interventions. Usually focuses on lifestyle, diet, & stress reduction. NO PROVEN TREATMENT! Antidiarrheals: use temporarily, reserve for severe.

Loperamide (Imodium) or diphenoxylate (Lomotil) 2.5-5mg q6h usually works.

Constipation: high fiber diet, hydration, exercise, bulking agents. If these don't work, intermittent use of stimulant laxatives (lactulose or mag hydroxide); don't use long-term!

Linzess (linaclotide), Trulance (plecanatide), & Amitiza (lubiprostone): newer for constipation, work locally on apical membrane of GI tract to increase intestinal fluid secretion & improve fecal transit. Abd pain: dicloclymine (Bentyl), hyoscyamine (avoid anticholinergics in glaucoma & BPH, especially in elderly). TCAs & SSRIs can relieve symptoms in some pt's.

Can be managed by PCP, but if not responsive to tx, refer to GI.

IBD: chronic immunological dz that manifests in intestinal inflammation.

UC & Crohn's are most common.

UC: mucosal surface of colon is inflamed, resulting in friability, erosions, bleeding.

Usually occurs in rectosigmoid area, but can involve entire colon. Ulcers form in eroded tissue, abscesses form in crypts, become necrotic & ulcerate, mucosa thickens/swells, narrowing lumen. Pt's are at risk for perforation. Symptoms: bleeding, cramping, urge to defecate. Stools are watery diarrhea with blood/mucus. Fecal leuko almost always present in active UC. Tenderness usually in LLQ or across entire abd.

Crohn's: inflammation extends deeper into intestinal wall. Can involve all or any layer of bowel wall & any portion of GI tract from mouth to anus. Characteristic segmental presentation of dz'd bowel separated by areas of normal mucosa ("skipped lesions").

With progression, fibrosis thickens bowel wall, narrowing lumen, leading to obstructions, fistulas, ulcerations. Pt's are at greater risk for colorectal cancer. Most common symptoms: cramping, fever, anorexia, wt loss, spasms, flatulence, RLQ pain/mass, bloody/mucus/pus stools. Symptoms increase with stress, after meals. 50% of pt's have perianal involvement (anal/perianal fissures).

Inflammation can lead to bleeding, fever, increased WBC, diarrhea, cramping.

Abnormalities can be seen on cross-sectional imaging or colonoscopy.

No single explanation for IBD. Theory: viral, bacterial, or allergic process initially inflames small or large intestine, results in antibody development which chronically attack intestine, leading to inflammation. Possible genetic predisposition.

Dx made by H&P correlated with symptoms, must exclude infectious cause for colitis.

Primary dx tools: sigmoidoscopy, colonoscopy, barium enema w/small bowel follow-through, CT.

Tx is very complex, managed by GI.

Drugs: 5-aminosalicylic acid agents have been used for >50yrs, but have shown to be of little value in CD; still used as first attempt for UC. Antidiarrheals w/caution (constipation). Don't use in acute UC or if toxic megacolon. Corticosteroids used when 5-ASA not working. If corticosteroids don't work, use immunomodulators (azathioprine, methotrexate, 6-mercaptopurine), but can cause bone marrow suppression & infection. Newer class: anti-TNF (biologic response modifiers) for mod-severe dz. Remicade (infliximab), Humira (adalimumab), Entyvio (vedolizumab); can increase risk of infection.

24. What are two common IBD's?

Ulcerative colitis

Crohn's disease

25. Describe the characteristics of acute diverticulitis.

Subjective:

S/S of infection (fever, chills, tachycardia)

Localized pain LLQ

Anorexia, n/v

If fistula present, additional s/s will be present associated w/affected organ (dysuria, pneumaturia, hematochezia, frank rectal bleeding, etc)

Objective:

Tenderness in LLQ

Maybe firm, fixed mass at area of diverticuli

Maybe rebound tenderness w/involuntary guarding/rigidity

Hypoactive bowel sounds initially, then hyperactive if obstructive process present

Rectal tenderness

+occult blood

Diagnostics:

Mild-moderate leukocytosis

Possibly decreased hgb/hct r/t rectal bleeding

Bladder fistula: urine will have increased WBC/RBC, culture may be +

If peritonitis, blood culture should be done (for bacteremia)

Abd XR: perforation, peritonitis, ileus, obstruction

CT may be needed to confirm

26. What is the difference between sensorineural & conductive hearing loss?

Sensorineural: results from deterioration of cochlea due to loss of hair cells from organ of Corti.

Very common in adults.

Gradual, progressive, predominantly high-frequency loss w/advanced aging (presbycusis).

Other causes: ototoxic drugs, loud noises, head trauma, autoimmune dz, metabolic dz, acoustic neuroma.

Genetic makeup can influence.

Not correctable w/medical or surgical therapies, but can stabilize if loss is gradual.

Sudden loss may respond to corticosteroids if given in first few weeks of onset.

Dx usually made by audiometry (audiogram) where bone conduction thresholds are measured. Done by audiologist.

No proven or recommended treatment/cure. Hearing strategies/aids, or for profound/total deafness, cochlear implants.

In Weber test: normal ear hears sounds better.

Commonly seen in primary care: tinnitus & Meniere's.

Conductive: result of obstruction between middle & outer ear.

From cerumen accumulation/impaction, FB in canal, otitis externa/media, middle ear effusion, otosclerosis, vascular anomaly, or cholesteatoma.

Tx depends on accurately identified etiology.

Most types are reversible.

In Weber test: defective ear hears tuning fork louder.

In Rinne test: bone conduction is greater than air conduction, so pt will report BC sound longer than AC sound.

27. What is the triad of symptoms associated with Meniere's disease?

Vertigo
Hearing loss
Tinnitus

28. What symptoms are associated with peritonsillar abscess?

Almost always unilateral, located between tonsil & superior pharyngeal constrictor muscle
Gradual onset of severe unilateral sore throat
Odynophagia
Fever
Otalgia
Asymmetric cervical adenopathy
Pronounced trismus (hot potato voice)
Toxic appearance (poor/absent eye contact, failure to recognize parents, irritability, inability to be consoled/distracted, drooling, severe halitosis, tonsillar erythema, exudates)
Swelling above affected tonsil with a discrete bulge, deviation of soft palate/uvula

29. What is the most common cause of viral pharyngitis?

Adenovirus
Mononucleosis (Epstein-Barr)
HSV-1
RSV
Flu A&B
Coxsackie
Enteroviruses

30. What is the most common cause of acute n/v?

Acute gastroenteritis

31. What is the importance of obtaining an abdominal XR to rule out perforation or obstruction even though the diagnosis of diverticulitis can be made clinically?

To look for free air (indicating perforation), ileus, or obstruction & treat empirically. Early treatment leads to better outcomes, so don't delay treatment.

32. What are colon cancer screening recommendations relative to certain populations?

Age 50 or older: initial scope at 50yo, then every 10yrs.
If at increased/high risk of colorectal cancer, start screening earlier (i.e. age 40) & be screened more often based on findings.
African Americans: Starts screening at age 40-45.

33. Identify at least two disorders that are considered to be disorders related to conductive hearing loss.

Cerumen accumulation/impaction
FB in ear canal

Otitis externa
Chronic otitis media
Middle ear effusion
Tosclerosis
Vascular anomaly
Cholesteatoma

34. What is the most common cause of bacterial pharyngitis?

Group A Beta Hemolytic Streptococcus (GABHS)

35. What are the clinical findings associated with mononucleosis?

Gradual onset of fever
Marked malaise
Severe sore throat
Maybe exudative tonsillitis (50% of cases)
Palatal petechiae/rash
Anterior/posterior cervical lymphadenopathy
Splenic enlargement

36. How is the diagnosis of streptococcal pharyngitis made clinically based on the Centor criteria?

Fever >38C (100.5F)
Tender anterior cervical lymphadenopathy
No cough
Pharyngotonsillar exudate

Presence of all 4 strongly suggest GABHS infection.
3 or more present: empirically dx & treat w/out further testing

37. What is one intervention for a pt with gastroenteritis?

Fluid repletion (PO if possible, pedialyte; IVF for more severe dehydration)
Nutrition

38. When are stool studies warranted?

In pts with severe or prolonged diarrhea, fever >38.5C, bloody stools, stools +leukocytes/occult blood

39. What is an appropriate treatment for prophylaxis or treatment of traveler's diarrhea?

Trimethoprim-sulfamethoxazole (Bactrim DS) 1 tab BID x3days
Cipro 500mg
Norfloxacin (Noroxin) 400mg
Ofloxacin (Floxin) 300mg

40. Describe the component of the H&P that should be done for a pt with abd pain.

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Upper abd pain: ask about chronic/recurring & related symptoms (bloating, fullness, heartburn, n/v)

Lower abd pain: if acute, is pain sharp, intermittent continuous? If chronic, is there a change in bowel habits (alternating diarrhea/constipation)?

Radiation?

41. What is at least one effective treatment for IBS?

Diet (avoid lactose, caffeine, legumes, artificial sweeteners; eat low-fat diet with increased protein, high fiber, bulk-producing agents, 64oz water daily)

Lifestyle modification

Exercise

Stress reduction

Pharm (for moderate-severe symptoms only): antidiarrheals (imodium, lomotil), laxatives (lactulose, mag hydroxide), antispasmodics (dicyclomine, hyoscyamine), tricyclic antidepressants; avoid anticholinergics with glaucoma & BPH pts.

42. What is at least one prescription med used to treat chronic constipation?

Linzess (linaclotide)

Trulance (plecanatide)

Amitiza (lubiprostone)

Lactulose

Mag hydroxide

43. What is at least one treatment for Meniere's disease?

Bedrest with eyes closed, protection from falling

Maintenance therapy: chlorothiazide (Diurel) 500mg/day

Meclizine

Promethazine

Dimenhydrinate

Diphenhydramine

Metoclopramide

44. T/F

The majority of dyspnea complaints are due to cardiac or pulmonary decompensation.

True

45. What are the differences between intrathorax & extrathorax flow disorders?

Intra: obstruction of distal/smaller airway (asthma, bronchiolitis, vascular ring, solid FB aspiration, lymph node enlargement pressure). Take place in the supraglottic, glottis, & infraglottic regions. Supraglottic = space above larynx & epiglottis. Glottis = area of opening in vocal cords. Infraglottic = starts at bottom of vocal cords & ends at top of trachea.

Extra: Obstruction of proximal/larger airway (rhinitis with nasal obstruction, nasal polyp, cranio-facial malformation, OSA, tonsil/adenoid hypertrophy, laryngotracheomalacia, larynx papilloma, diphtheria, croup, epiglottitis, thymus hypertrophy)

Difference is location of obstruction.

46. What are at least 3 examples of flow & volume disorders (intra &/or extra thorax)?

Intra Flow:

Asthma

Bronchiolitis

Vascular ring

Solid FB aspiration

Lymph node enlargement pressure

Extra flow:

Rhinitis w/nasal obstruction/nasal polyp

Cranio-facial malformation

Obstructive sleep apnea

Tonsil-adenoid hypertrophy

Laryngo-tracheo-malacia

Larynx papilloma

Diphtheria

Croup

Epiglottitis

Thymus hypertrophy

Intra Volume:

PNA

Atelectasis

Pulmonary edema

Near drowning

Extra Volume:

Pneumothorax

Pneumomediastinum

Cardiomegaly

Heart failure

Pleural effusion

Hernia diaphragmatica

Diaphragmatica eventration

Intra-thorax mass

Chest trauma

Thorax deformity

Neuromuscular disorders

Gastritis

PUD
Extreme obesity
Peritonitis
Appendicitis
Acute abdomen
Aerophagia
Meteorismus
Ascites
Hepato-splenomegaly
Abdominal solid tumor
Anemia
Metabolic acidosis
CNS infections
Encephalopathy
Psychologic
Poisoning
Trauma capitis
CNS disease sequelae

47. Differentiate between rubeola, rubella, varicella, roseola, 5ths disease, pityriasis rosea, h&/foot/mouth, & molluscum contagiosum.

Rubeola: "the Measles"

From morbillivirus

Highly contagious spread through respiratory drops

No cure

Vaccine since 1963

Pt appears very sick: high fever, red mucosal membranes, conjunctivitis, nasal congestion, reddish/purple generalized macular & papular rash. Lesions start on head, esp. face or behind ears, spread down body within 1-2 days.

Blood work: reverse-transcriptase polymerase chain reaction (RT-PCR) & IgG & IgM.

All positive cases must be reported to CDC.

Possible complications: PNA, bronchitis, myocarditis, encephalitis.

Pregnant: possible miscarriage.

Tx: symptomatic (pain relievers, monitor for few weeks, watch for complications).

Infectious 4 days before onset of rash up to 4 days after onset. Able to return to work/school after rash gone.

Rubella: German measles or 3-day measles.

Caused by rubella virus.

Rash may start 2wks after exposure, spread from respiratory droplets.

Low-grade fever, HA, sore throat, rhinorrhea, malaise, eye pain, myalgia 2-5 days before rash (may last weeks after outbreak).

Skin rash: rose-pink macules & papules, first on head, travel down body. Fades in 1-2 days in same order they appeared.

Clinical diagnosis.

Tx: symptomatic (apap, NSAIDs, rest).

Rubella vaccination.

Infectious 4-7 days before rash, can return to work/school after rash gone.

Varicella: chicken pox.

Highly contagious.

Caused by varicella zoster virus (VZV).

Malaise, fever, chills, HA, arthralgia, then 1-2 days later urticarial erythematous macules & papules appear, quickly turning into vesicles & pustules. Rash starts on face/chest, spreads quickly over entire body. Blisters can be in ear canal or mouth. Dry up in 1wk.

Clinical diagnosis.

Tx: symptomatic (oral antihistamines, NSAIDs, cool compresses, oatmeal baths).

Varicella vaccination.

Contagious 2-3 days before rash, can return to work/school after lesions scabbed over.

Roseola: 6th disease

Caused by human herpes virus types 6 & 7.

Virus usually mild, common in children under age 2.

Spread through saliva.

Short-lived, 3-5 days.

High fever, irritability, diarrhea, cough, cervical lymphadenopathy.

Rash: light pink, erythematous macules & papules on face, neck, extremities. Usually resolves in 1-3 days.

Dx based on clinical presentation & history.

Tx: symptomatic.

Contagious 1-2 days before fever, can return to work/school when fever, fatigue, cough, diarrhea gone.

Fifth's dz: erythema infectiosum, human parvovirus.

Spread through respiratory drops, blood products.

3 stages: HA, fever/chills, possible cough, classic slapped cheek rash, bright red bilat cheeks (not forehead, nasal bridge, perioral area); pink lacy (reticulated) erythematous macules on all extremities & trunk (not palms, sole surfaces), may be itchy; 2-3wks of body rash

Dx can be made via blood test, but results not detected for 3wks after rash, so not valuable.

Tx: symptomatic. Avoid heat (exacerbates rash).

Contagious few days before rash, can return to work/school after initial s/s of HA, fever, chills are gone, even if rash still present.

Pityriasis rosea: viral, but difficult to confirm.

Majority 10-35yo, more females than males.

Common breakouts in spring.

Solitary 2-4 patch/plaque on trunk ("herald patch"), starts 2-3wks before general rash.

Rash is pink, erythematous, round to oval plaques/papules w/possible scaly borders.

Resembles shape of a Christmas tree on the trunk. Usually not on face, palmar, sole

surfaces. Can be itchy. Pt may have low-grade fever, HA, fatigue. Can last 1-2mo or longer.

Dx made by H&P.

Tx: antihistamines, sun (could help rash). Acyclovir for 1wk (may reduce severity).

Contagious 7-14 days prior to rash. Returning to activities depend on symptoms, but by the time rash appears, pt is not contagious.

H&, foot, mouth dz: mostly occurring in young children.

Caused by coxsackievirus A16 & enterovirus 71.

Low-grade fever, fatigue, sore throat 1-2 days, then rash.

Rash: vesicles on h&s/feet w/mouth sores. Mouth sores are in almost 90% of cases, usually first sign. H& vesicles appear with erythematous halos & appear mostly on soles/palms. Might appear on legs, butt, face. Usually resolve in 7 days.

Dx made by H&P.

Tx: symptomatic. Reassure parents that there will be no scarring.

Contagious 4-6 days prior to outbreak, can return to school when lesions are scabbed.

Molluscum contagiosum: from family of Poxviridae.

Virus is encased in protective sac that prevents immune system from being triggered.

Tiny pustules 2-5mm, some have slight depression in center of flesh-colored dome.

Single or multiple lesions.

Spread by contact, scratching, autoinoculation, shaving.

Most common places in kids are thighs/arms.

Most common places in adults are genital region.

Never soles/palms.

Sometimes erythematous papules/scaling from itching.

Can last 8mo or longer.

Dx by H&P, often misdiagnosed as genital warts.

Tx: non-Rx OTC Zymaderm. Rx topical retinoids. PO Cimetidine (Tagamet) 40mg/kg/day x2mo. Cryosurgery w/liquid nitrogen (may be scarring or hypopigmentation).

No single treatment better than another.

Exclude from activities/sports until symptom-free or lesions are covered.

48. What are common characteristics in a rash caused by Group A strep?

Red sandpaper rash (feels like it too)

Fever

Bright red sore throat

Lymphadenopathy

Bright red skin in skin folds (underarms, elbows, groin)

49. What are treatment options for Group A B-hemolytic strep pharyngitis?

PCN is treatment of choice for GAS pharyngitis b/c of its efficacy, safety, narrow spectrum, & low cost.

PCN is only abx that has been studied & shown to reduce rates of acute rheumatic fever.

For most adult pts: Pen V 500mg BID-TID x10 days.

For most kids: Pen V or amox.

Alternatives for those with PCN allergies: 1st gen cephs, erythromycin, clinda, clarithromycin, azithromycin.

50. Differentiate between tinea pedis, cruris, corporis, & unguium. What are the appropriate treatments for each?

Tinea pedis: aka athlete's foot.

Erythematous, scaly, possible inflammation/itching.

Tx: antifungal cream, vinegar soak/Burrow solution to decrease itch. Ketoconazole is topical treatment of choice, used for at least 4wks if not longer to resolve. OTC antifungal spray for all shoes during/after treatment. Terbanifine sometimes for prolonged/severe cases.

Tinea cruris: aka jock itch.

Rash presents on inner thighs, butt, groin. Well-demarcated erythematous/tan plaques with raised scaly borders.

Tx: topical antifungal; if repetitive infections, OTC zeabsorb powder can help prevent breakout.

Tinea corporis: aka ringworm

On the extremities or trunk

Erythematous annular lesion with scaly macules & papules, well-defined edges.

May be itchy.

Edge of lesion is raised, center of lesion is flattened. Can be small or cover large body surface area.

Tx: antifungal topical cream or PO antifungal (Terbanafine) if widespread.

Follow-up 3-4wks.

Tinea unguium: aka onychomycosis.

Fingernails or toenails.

Very common.

Nail appearance may vary: yellow, green, black or white ridging w/possible cracking of nails.

Tx: determined by severity & pt's age. Topical Ciclopirox nail laquer 8% applied daily for months at base of nail. PO Terbanafine 250mg daily x2wks has high cure rate but pt has to have healthy liver (do CMP prior to initiation).

Cure is VERY slow (4-6mo for fingernails, 8-10mo for toenails).

51. What is the virus that causes warts?

HPV (human papilloma virus)

52. Differentiate between atopic & contact dermatitis. Give examples of each.

Contact: allergic reaction to substance that produces immune reaction in skin resulting in pruritic & erythemic rash.

Common causes: nickel, abx creams, cosmetics, soaps, fragrances, jewelry, plants

(poison ivy).

Usually occurs in same area that was directly exposed to reaction within minutes to hours of exposure.

Not contagious, cannot be spread from one area of body to another by touching.

Tx: removal of substance causing reaction; mostly symptomatic; topical antihistamines; steroid creams; PO antihistamines to combat itching; more severe cases or if reaction is on face, esp around eyes: taper dose of PO steroids.

Can lead to secondary infection if area is repeatedly scratched.

Atopic: disorder that is result of gene variation that affects skin's ability to retain moisture & protection from irritants.

Often associated in people with asthma or hay fever.

Patches of itchy, dry skin; red to brownish-gray; may have small raised vesicles that leak when scratched.

Usually starts before age 5, persists into adulthood.

Tx: symptomatic, much like contact dermatitis. Topical steroid creams, PO antihistamines.

Moisturize skin at least BID. Avoid triggers that worsen rash.

53. What is a normal response to TB skin tests & what does it mean?

Standard recommended TB test (Mantoux test) is administered by injecting 0.1mL containing 5 TU of PPD into intradermal layer of forearm. Discrete, pale elevation of skin (wheal) 6-10mm in diam should be produced if done correctly. Wheal is usually quickly absorbed.

Test should be read 72hrs after administration: looking/feeling for induration (measured transversely to the long axis of the forearm, in mm).

54. What are some common reasons for decreased responsiveness to TB skin testing?

HIV-infected pts

People with weakened immune systems

Severe TB disease

Some viral dz's (measles, mumps, chicken pox, etc.)

Some bacterial dz's (typhoid, etc.)

Pts infected with M. tuberculosis in the past 8wks

Pts injected with a live virus vaccine

Pts with brucellosis, typhus, leprosy, pertussis

Pts with fungal infections

Renal failure

Severe protein depletion or afibrinogenemia

Hodgkin's, lymphoma, chronic leukemia, sarcoidosis

Medical steroids, TNF alpha blockers

Newborns

Elderly with immature or waning immunity

Surgery, burns, mental illness, graft-vs-host reactions

55. What are some common meds used to treat TB?

Isoniazid
Rifampin
Pyrazinamide
Ethambutol

56. What is the MOA & common SE's of Isoniazid?

MOA:

Isoniazid is a prodrug & must be activated by M. tuberculosis catalase-peroxidase enzyme KatG.

Activation produces oxygen-derived free radicals (super oxide, hydrogen peroxide, peroxyxynitrite) & organic free radicals that inhibit formation of mycolic acids of bacterial cell wall, causing DNA damage, & death of bacillus.

Most common mechanism of resistance consists of KatG mutations, which decrease activity of isoniazid & prevent prodrug from being converted into its active metabolite.

SE:

N/V

Epigastric pain

Transitory & asymptomatic increase in hepatic enzyme levels

Arthralgia

Changes in behavior: HA, insomnia, euphoria, agitation, anxiety, somnolence

Acne

Cutaneous pruritis or fever

What is the MOA & common SE's of Rifampin?

MOA:

Inhibits gene transcription of mycobacteria by blocking DNA-dependent RNA polymerase, which prevents bacillus from synthesizing messenger RNA & protein, causing cell death.

SE:

Nausea

Anorexia

Abd pain

Orange colored tears/sweat/urine

Pruritis with or without erythema (6% of pts)

Flulike syndrome

Fatigue

Dizziness

HA

Dyspnea

Ataxia

57. What is the MOA & common SE's of Pyrazinamide?

MOA:

Prodrug that needs to be converted to active form, pyrazinoic acid, by bacterial enzymes.

MOA not fully understood

Possibly enters bacillus passively, converts to pyrazinoic acid by pyrazinamidase, reaches high concentrations in bacterial cytoplasm due to inefficient efflux system. Accumulation of pyrazinoic acid decreases intracellular pH to levels that cause inactivation of enzymes.

SE:

N/V

Anorexia

Hyperuricemia

Arthralgia

Exanthema

Pruritis

Dermatitis (photosensitivity)

58. What is the MOA & common SE's of Ethambutol?

MOA:

Interferes with biosynthesis with arabinogalactan enzyme, which mediates polymerization of arabinose into arabinogalactan.

SE:

Retrobulbar neuritis (usually reversible, depending on dose & length of therapy)

N/V

Abd pain

Hepatotoxicity

Eosinophilia

Neutropenia

Thrombocytopenia

Myocarditis

Pericarditis

HA

Dizziness

Confusion

Hyperuricemia/gout

Skin rash

Arthralgia

Fever

Occasionally pulmonary infiltrates

59. What are the different strengths of tretinoin & when is each appropriate?

Gel:

0.025% & 0.01%

Cream:

0.1%, 0.05%, & 0.025%

Caps:
10mg

Topical used for acne

Oral used for induction of remission in acute promyelocytic leukemia

60. Identify various types of lesions based on their characteristics:

Rubeola:

Pt looks ill

High fever

Red mucus membranes

Conjunctivitis

Nasal congestion

Reddish/purple generalized macular/papular rash

Lesions start on head (face/behind ears), spread over rest of body in 1-2 days

Rubella:

Low-grade fever

HA

Sore throat

Rhinorrhea

Malaise

Eye pain

Myalgia 2-5 days before rash

Rose-pink macules/papules

Lesions start on head, travel down body

Rash disappears in 1-2 days in same order it appeared

Varicella:

Malaise

Fever

Chills

HA

Arthralgia

1-2 days later, urticarial erythematous macules/papules appear, quickly turning to vesicles/pustules

Rash starts on face/chest, spreads quickly over entire body, dry up in 1 week

Roseola:

High fever

Irritability

Diarrhea

Cough

Cervical lymphadenopathy

Light pink erythematous macules/papules on face, neck, extremities, resolves in 1-3

days

Fifth's Disease:

Starts with HA, fever, chills, maybe cough

Stage 1: "Slapped cheek" rash

Stage 2: Pink lacy erythematous macules on extremities/trunk, spares palms & soles.

May be itchy.

Stage 3: 2-3 weeks of body rash

Pythiriasis rosea:

2-4 patches or plaques on trunk that starts 2-3wks before general rash, aka "herald patch"

Rash pink to erythematous, round to oval plaques & papules with possibly scaly borders

Rash resembles shape of Christmas tree

Rash can be itchy

Low-grade fever

HA

Fatigue

Can last 1-2mo or longer

H&, foot, & mouth:

Mouth sores usually first to appear

H& vesicles are erythematous halos, mostly soles & palms

Sometimes are on legs, butt, face

Usually resolve in 7 days

Molluscum contagiosum:

Tiny pustules 2-5mm

Flesh-colored dome, some have slightly depressed center

Single or multiple lesions

Kids: thighs & arms

Adults: genital region from sexual contact

Soles & palms always spared

Sometimes erythematous & scaly

Can last 8mo or longer

Folliculitis:

Little pustules or erythema around base of hair follicle

Abscesses:

Sac or pore filled with pus

Erythematous, tender nodule that can be fluctuant

Furuncle:

infection that involves hair follicle & extends into surrounding tissue

Mostly on axillae, neck, buttock

Carbuncle:

Cluster of abscesses that connect subcutaneously to form mass

Group A strep:

Red s&paper rash

Fever

Bright red sore throat

Lymphadenopathy

Bright red skin in skin folds

Tinea pedis:

Erythematous, scaly, possibly inflammation or itching on feet

Tinea Cruris:

Jock itch

Rash present on inner thighs, butt, groin

Well-demarcated erythematous or tan plaques with raised scaly borders

Tinea corporis:

Ringworm

On extremities or trunk

Erythematous annular lesion w/scaly macules/papules, well-defined edge

May be itchy

Edge is raised & center is inflamed

Tinea unguium:

Onychomycosis

Fingernails or toenails

Appearance varies: yellow, green, black, white ridging, cracking of nails

Warts:

HPV causes

Skin colored rough papule, sometimes grayish surface

Single lesions or clusters

Sometimes tiny black or red dots in lesions

Scabies:

Intense itching worse at night

Light pink curved or linear burrows, occasionally w/black dot on one end

Commonly in between fingers & toes

Actinic keratosis:

Result of cumulative sun exposure & aging

Rough textured skin, maybe flesh or pink colored

Sometimes thick & scaly, can evolve into plaque
Sometimes stinging sensation when rub area
Lesion never goes away, no matter how much moisturizer used

Vitiligo:
Michael Jackson disease
Depigmented areas of skin
Well-demarcated
Macules or papules surrounded by normal skin

Contact dermatitis:
Allergic reaction to substance
Pruritic & erythemic rash
Occurs on area that was directly exposed to reaction

Atopic dermatitis:
Patches of itchy, dry skin
Can be red to brownish-gray
May have small raised vesicles that leak when scratched

61. What are common characteristics associated with blepharitis, chalazion, & hordeolum.

Blepharitis: irritation, burning, itching, scales, redness.
If lice is cause: reddish brown crust in lashes (not white or clear as typically seen).

Chalazion: mass in mid-portion of upper lid away from margin. Usually not painful or tender. Slightly red, swollen.

Hordeolum: usually on outside of lid, abscess on lid margin. Redness, swelling, painful.

62. Differentiate between viral, allergic, bacterial, toxic, & HSV conjunctivitis.

Bacterial: aka pink eye.
Direct h&-to-eye contact w/infected person.
Spread of one's own nasal/sinus bacteria during illness.
Purulent discharge (HALLMARK)
Reddened conjunctiva
Eyelid swelling
Can start unilat, but can spread bilat.
May resolve without treatment, but abx drops can shorten duration.
Very contagious (stay home until 24hrs of abx treatment or when clinical improvement noted).

Viral: usually caused from adenovirus, but can be HSV, HZV, molluscum contagiosum.
Irritation, mild light sensitivity, swollen lids, mild FB sensation.
Mild conjunctival hyperemia to intense hyperemia. Watery/mucousy drainage, not purulent.

Enlarged tender preauricular lymph nodes on affected side.
Red throat, nasal drainage, ear infection, etc.
Self-limiting, resolve on their own from few days to few weeks.
Highly contagious
Current recommendation is stay home until redness/tearing resolved.

Allergic: usually caused by environmental allergen (pollen, grass, trees, etc.).
Can be seasonal & can be isolated to eyes or include upper resp allergy symptoms such as rhinitis.
Hallmark characteristic: itching
Diffuse, milky, conjunctival hyperemia
Swollen conjunctiva
Tearing
Almost always bilat
Uniquely identifying bumps on conjunctiva ("follicles")
Tx: symptomatic. Artificial tears, anti-allergy drops.

Toxic: due to overuse of topical ocular meds (Visine), but abx drops most common (usually from using abx drops for longer than prescribed or for viral infections).
Clear, watery discharge & red conjunctiva
Dx usually from history
Tx: stop the drops

HSV: spread by contact w/persons who have visible, infected lesions & w/persons symptomatically shedding the virus.
Pt may be experiencing prodrome of ill-related symptoms (malaise, low grade fever, pain/tingling near site of lesions but lesions not yet visible).
Skin vesicles
Conjunctivitis (same as viral)
Corneal infection w/hallmark dendrite appearance

63. Which chemical injury is associated with the most damage & highest risk to vision loss?

Moderate to severe alkali (ammonia, drain cleaners, cement, plaster/mortar, airbag rupture, fireworks; all contain ammonia, lye, lime, sodium, mag hydroxide).

64. Which cardiac or pulmonary disorders contribute to the majority of dyspnea complaints due to decompensation?

asthma;
chronic obstructive lung disease;
malignancy;
heart failure;
interstitial lung disease;
pneumonia;
valvular heart disease;
intracardiac shunt;

arrhythmias;
cardiomyopathies;
myocardial ischemia.

65. What are appropriate tests in the work-up for dyspnea?

CXR to rule out tumors, TB, PNA, other major pulmonary disorders.

CBC w/diff to rule out anemia, infection

Peak expiratory flow test (in office) to determine degree of expiratory airflow obstruction in pt's with asthma, COPD

EKG

Echo

Spirometry to determine obstructive, restrictive, mixed lung dz

Sleep apnea or sleep hypoxia testing

66. Describe classes of asthma.

Mild intermittent:

Less than once weekly

Brief exacerbations lasting few hrs to few days

Nighttime symptoms <2/wk

PEFR or FEV1: >80% predicted

PFT variability >20%

Mild persistent:

Symptoms >2/wk but <daily.

May be several times at night/month

May effect sleep

PEFR or FEV1 >80%

PFT variability 20-30%

Moderate persistent:

Daily but not continual

Nighttime, but not every night

More than once weekly

Exacerbations affect activity/sleep

Daily use of short-acting beta-2 agonist

PEFR or FEV1 60-80%

PFT variability >30%

Severe persistent:

Continuous daily

Frequent nighttime

Frequent exacerbations

Physical activity limited

PEFR or FEV1 < or = 60%

PFT variability >30%

67. What are the different treatments for the asthma classes?

Mild intermittent:

No daily meds

PRN inhaled short acting beta-2 agonist or cromolyn before exercise or allergen exposure

Mild persistent:

One daily controller med (inhaled corticosteroid), cromolyn/nedocromil, leukotriene modifiers

Inhaled beta-2 agonist PRN

Moderate persistent:

Daily meds: combo inhaled medium dose corticosteroid & long-acting bronchodilator: cromolyn-nedocromil, leukotriene modifiers

Severe persistent:

Inhaled beta-2 agonist PRN

Multiple daily controller meds: high dose inhaled corticosteroid, long-acting bronchodilator, cromolyn/nedocromil, leukotriene modifiers.

68. Identify respiratory characteristics of chronic bronchitis.

Characterized by excessive mucus secretion in bronchial tree

Manifests by chronic or recurrent cough (with or without sputum), present on most days for minimum of 3mo of the year for at least 2 consecutive years.

Pts usually use accessory muscles with respiration & have dyspnea with or without wheezing.

Pts may have s/s of right HF (edema, cyanosis).

FVC: normal to increased

RV: increased

TLC: normal

EFV: normal to decreased

FEV1/FVC: decreased

69. Identify respiratory characteristics of asthma.

Chronic, inflammatory, obstructive disease in airways.

May occur at any age & presents with wheezing (airway spasms), chest tightness, dyspnea, cough.

Reversible hyperreactivity of bronchi & bronchioles to a variety of stimuli.

FVC: normal

RV: normal, increased during attacks

TLC: normal to increased

EFV: normal to decreased

FEV1/FVC: normal to decreased

70. Identify respiratory characteristics of COPD.

Progressive disease characterized by presence of airflow obstruction due to chronic bronchitis or emphysema.

3rd leading COD in US.

Dz of lung parenchyma & small airways

Pts may be asymptomatic for 10-20yrs except for frequent colds, persistent morning cough, URIs.

Pts present with fatigue, SOB, cough, hyperinflation (barrel chest), wheezing, decreased breath sounds, hyperresonance.

Stage 1 (mild): FEV $>80\%$.

Stage 2 (moderate): FEV 50-79%

Stage 3 (severe): FEV 30-49%

Stage 4 (very severe): FEV $<30\%$

71. What is the CURB-65 tool & how is it used?

Used to determine the severity of CAP & is objective, easy tool to remember.

C: confusion

U: BUN >19

R: resp rate >30

B: BP syst <90 or diast <60

65: >65 yo

1 point awarded for each.

0-1: low risk, consider home tx

2: short inpatient hospital stay or closely monitor outpatient.

3 or more: severe pneumonia, hospitalize & consider ICU

72. What are subjective & objective findings with asthma?

Subjective:

SOB

CP/tightness

Objective:

Wheezing

Dyspnea

Excessory muscle use

Peak flow meter readings varied

Non-productive cough

73. What are subjective & objective findings with COPD?

Subjective:

SOB

Chest tightness

Urge to clear lungs in morning

Fatigue

Objective:
Wheezing
Cough w/sputum chronically & consecutively
Cyanosis
URIs diagnosed
Wt loss
Edema

74. What are subjective & objective findings with sinusitis?

Subjective:
HA
Pain in sinuses
Facial tenderness
Sore throat
Cough
Persistent symptoms lasting >7days

Objective:
Fever,
Discolored nasal drainage
Facial swelling
Bad breath

75. What are subjective & objective findings with allergic rhinitis?

Subjective:
itchy throat/nose/eyes
Watery eyes
Head/nasal congestion
Fatigue
Ear pressure
Sneezing

Objective:
Cobblestoning in back of throat
Post-nasal clear drip
Red eyes

76. What are subjective & objective findings with vasomotor rhinitis?

Subjective:
Stuffy nose
Congestion
Sneezing
Cough non-productive

Objective:

Clear post-nasal drip
Possible cobblestoning

77. What are subjective & objective findings with influenza?

Subjective:

Cough
Sore throat
HA
Fatigue
Muscle/body aches
Sometimes n/v/d
Chills

Objective:

Fever
Rhinorrhea w/productive phlegm occasionally discolored
Occasionally red eyes
Sometimes tachy

78. What are treatment options for asthma?

Long acting steroid inhalers to prevent symptoms
Short acting albuterol rescue inhalers prn
Learn triggers & avoid as much as possible

79. What are treatment options for COPD?

Maintenance steroid inhaler & bronchodilator prn
O2 may be necessary
Quit smoking
Complete pulmonary rehab
Exercise for breathing & muscle strength

80. What are treatment options for sinusitis?

Short-term (<7days): OTC anti-inflammatories, nasal decongestants, nasal saline rinse
Long-term/not resolving/worsening: may be bacterial & need abx

81. What are treatment options for allergic rhinitis?

Antihistamines
OTC anti-inflammatory prn
Decongestant prn
ID & avoid allergens & causative factors
Avoid touching face or eyes as much as possible

82. What are treatment options for vasomotor rhinitis?

Similar to allergic rhinitis

83. What are treatment options for influenza?

Rest
Fluids
OTC anti-inflammatories
OTC throat lozenges
Cough syrup
Tamiflu if within last 48hrs

84. Define & describe chronic cough.

Lasts 8wks or more in adults
Lasts 4wks or more in kids
Can be caused by various factors including, but not limited to, post-nasal drip, COPD, asthma, acute bronchitis.
Can be productive or non-productive (non-productive with asthma or productive with possible pneumonia).

85. What are common eye emergency conditions that require emergency room eval?

Gonococcal conjunctivitis (sight threatening because it can affect the cornea)
Eyelid laceration
Moderate to severe subconjunctival hemorrhage with concern for more extensive injury.
Foreign body
Hyphema
Open or ruptured globe
Chemical injuries
Orbital cellulitis (because it can cause meningitis)

86. IBS is a:

Disordered sensation or abnormal function of the small & large bowel. Can lead to abdominal pain & alteration in bowel habits.

87. Crohn's disease is the:

Inflammation of any or all of the bowel wall & any portion of the GI tract from the mouth to the anus. Can result in "skipped lesions."

88. Ulcerative colitis is a:

Condition in which the mucosal surface of the colon is inflamed, leading to friability, erosions & bleeding. Can affect the entire colon.

89. T/F

If you suspect diverticulitis, you can treat with abx alone. No imaging is necessary.

False

90. T/F

It is safe to use laxatives long-term for the treatment of constipation.

True (practice quiz was wrong, per instructor feedback & lesson)

91. T/F

According to the American Cancer Society guidelines, African Americans with no other risk factors for colon cancer should begin routine colon cancer screening at age 45.

True

92. T/F

In ulcerative colitis, typical symptoms include abdominal cramping, fever, anorexia, wt loss, spasm, flatulence, & RLQ pain or mass. Stools may contain blood, mucous, &/or pus.

False

93. T/F

In diverticulitis, typical symptoms include bleeding, cramping pain, & the urge to defecate. Stools are characteristically watery diarrhea with blood & mucus.

False

94. T/F

In diverticulitis, typical symptoms include LLQ pain & tenderness, fever, change in bowel habits (usually diarrhea), & sometimes nausea/vomiting.

True

95. Treatment of IBS with constipation:

High fiber diet, Amitiza, Linzess.

96. Treatment of IBS with diarrhea:

Lomotil, Imodium

97. Treatment of IBS with abd pain:

Bentyl, tricyclic antidepressants

98. T/F

Acute gastroenteritis is the most common cause of nausea & vomiting.

True

99. T/F

Nausea, vomiting, & diarrhea do not usually occur together in acute gastroenteritis.

False

100. T/F

The most common pathogen responsible for acute gastroenteritis is bacterial.

False

101. T/F

Norovirus is the most common virus responsible for acute gastroenteritis

True

102. If a person presents to the office with nausea, vomiting, & diarrhea, which of the following would prompt you to order stool studies?

Symptoms that have been ongoing for 6 days

Antibiotic use in the past month

More than four bowel movements per day

Abdominal pain

Antibiotic use in the past month

103. Which of the following would be an appropriate treatment for prophylaxis or treatment of traveler's diarrhea?

Amoxicillin

Keflex

Ciprofloxacin

Flagyl

Ciprofloxacin

104. T/F

The history is the most important part of the visit for a patient with complaint of a hearing disorder.

True

105. T/F

Meniere's disease is diagnosed by exclusion.

True

106. T/F

The majority of TM ruptures will heal themselves.

True

107. Age-related hearing loss (presbycusis) is classified as which type of hearing loss?

Sensorineural

108. The triad of symptoms associated with Meniere's disease include _____.

Hearing loss, tinnitus, vertigo

109. The most common bacterial cause of pharyngitis or tonsillitis is from Group _____ Hemolytic Streptococcus.

A

110. Which are not findings associated with mononucleosis?

Exudative tonsillitis
Palatal petechiae & exantham
Splenic enlargement
Cough

Cough

111. Name the four clinical features suggestive of bacterial pharyngitis (Centor criteria)

Fever, cervical adenopathy, pharyngeal/tonsillar exudate, no cough
Fever, fatigue, submandibular adenopathy, cough
Submandibular adenopathy, pharyngeal/tonsillar exudate, cough, fever
Pharyngeal/tonsillar exudate, cough, fever, fatigue

Fever, cervical adenopathy, pharyngeal/tonsillar exudate, no cough

112. A red tongue with enlarged papillae, sometimes seen with strep throat is called a _____ tongue

Raspberry
S&paper
Strawberry
Blackberry

Strawberry

113. T/F

Patients with > 3 Centor criteria can be empirically diagnosed with GABHS & treated without further testing.

True

114. T/F

Empiric treatment of asymptomatic household contacts of patients with acute GABHS pharyngitis is recommended.

False

115. T/F

Doxycycline is an alternative for patients with GABHS pharyngitis who are allergic to PCN.

False

116. T/F

Patients with mononucleosis who develop an erythematous, macular rash after taking amoxicillin for pharyngitis should be identified as having a PCN allergy.

False

117. Which is (are) a symptom(s) of peritonsillar abscess? (select all that apply)

Severe, unilateral sore throat
Fever
Asymmetric cervical adenopathy
Exudate
Severe, bilateral sore throat

Severe, unilateral sore throat
Fever
Asymmetric cervical adenopathy
Exudate

118. The most common cause of viral laryngitis is _____.
H. influenza

119. T/F
Fluorescein staining is a method used to differentiate the types of conjunctivitis.
False

120. T/F
Poison ivy is contagious & can be spread from touching the affected area.
False

121. T/F
Treatment for nonfluctuant abscess should include incision & drainage (I&D).
False

122. Which is NOT treatment for warts?
Salicylic acid
Liquid nitrogen
Duct tape
Mercurochrome
Mercurochrome

123. Tinea corporis is found on the:
Trunk/extremities

124. Tinea unguium is found on the:
nail

125. Tinea cruris is found on the:

Groin

126. Tinea pedis is found on the:
feet

127. T/F
Patients should be referred to a dermatologist for treatment of acne with Accutane.
True

128. T/F
Treatment of moderate acne may include the use of topical & oral antibiotic with a retinoid.
True

129. How is an appropriate differential developed?
List of possible diagnoses in order of priority.
Consider "skin in:" after complaint is given, clinician begins to consider all possible causes beginning with skin level & visualizing all structures in that area inward.

130. Clinical characteristics of GERD:
Heartburn
Regurgitation
Water brash (reflex salivation)
Dysphagia
Sour taste in mouth in the morning
Odynophagia (painful swallowing)
Belching
Coughing
Hoarseness
Wheezing usually at night
Substernal or retrosternal chest pain
Aggravating: reclining after eating, eating large meal, alcohol, chocolate, caffeine, fatty/spicy food, nicotine, constrictive clothes, heavy lifting, straining, bending over.
Alleviating: antacids, sitting upright after meal, eating small meals

131. Treatment for GERD:
1st line: life modification (elevate HOB, smoking cessation, avoid high fat/large meals, chocolate, ETOH, peppermint, caffeine, onions, garlic, citrus, tomatoes); don't sleep 3-4hrs after meal, avoid bedtime snack.

Meds: avoid Ca blockers, beta blockers, alpha adrenergic agonists, theophylline, nitrates, some sedatives.

Encourage wt loss for overweight/obese pts

If lifestyle mods not working: step-up/down treatment guidelines for GERD. Mild, intermittent symptoms: trial for 4wks, if symptoms persist, step up:

1. Dietary/lifestyle mods
2. Antacid
3. OTC H2-RA: cimetidine (Tagamet), ranitidine (Zantac), famotidine (Pepcid), nizatidine (Axid)

Trial above for 6wks, if symptoms persist, step up +referral to GI:

1. Continue dietary/life mods
2. H2-RA Rx dosage: cimetidine 800mg TID, ranitidine 150mg TID, nizatidine 150mg TID, famotidine 20mg TID. OR PPI: omeprazole 20mg, rabeprazole 20mg, lansoprazole 30mg, esomeprazole 20mg, or pantoprazole 40mg daily.

Trial above for 8wks, if symptoms persist step up:

1. Diet/lifestyle mods
2. PPI increase to 40mg daily

Trial for 8wks, if symptoms persist, step up:

1. Diet/lifestyle mods
2. Surgical intervention

132. Characteristics of AGE:

Nausea
Vomiting
Diarrhea
Fever
Abd pain/cramping
Fatigue
Malaise
Anorexia
Tenesmus
Rectal burning d/t frequent diarrhea
Rectal abrasion
Rectal bleeding
Passing stool w/blood & mucus
Severe dehydration
Increased HR
Dizziness

133. Treatment for AGE:

Fluid & diet
PO pts: Pedialyte, gatorade, oral rehydration salts, sports drinks, diluted fruit juices, broths, soups.
Boiled starches/cereals to facilitate enterocyte renewal

Hosp pts: IV fluid

Diarrhea:

Pepto (can be used to treat acute diarrhea, but not as effective as loperamide; don't use w/abx in pts with HIV)

Loperamide (Imodium): drug of choice for afebrile, nondysenteric cases of acute diarrhea

Lomotil: Rx only, used in afebrile, nondysentery of acute diarrhea, has central opiate effects.

Antibiotic treatments:

Bacterial:

C-diff (metronidazole/Flagyl 250mg x4 daily x10 days; vanc 125mg x4 daily x10 days).

Vibrio cholerae (tetracycline 500mg PO q5hr x2 days; bactrim DS q12hr x2 days).

Yersinia enterocolitica (tetracyclines 250-500mg q6hr x7-10days; cipro 500mg BID; tobramycin 3-5mg/kg q8h).

Salmonella (Bactrim DS or quinoline, norfloxacin 400mg or ofloxacin 400mg x2 daily x7-10 days). Shigella (Bactrim DS BID x3 days)

Viral:

Rotavirus/norwalk virus: no treatment, treat symptoms

134. Eustachian tube disorder presentation, symptoms, causes:

Presentation: depends on how it happened. Retracted TM, nasopharyngeal resemble allergic rhinitis, fusion may be present or not

Symptoms: decreased hearing, muffled hearing, feeling of fullness in ear, inability to pop ear, disequilibrium, tinnitus, pain

Causes: airplane, scuba diving, any disorder that can cause nasal congestion (allergic rhinitis, swollen adenoids, sinusitis, etc.)

135. Eustachian tube disorder treatment:

Treat underlying problem

Otitis media, sinusitis: treat w/abx

Allergic rhinitis: nasal steroids, decongestants (not in kids <6 or HTN/CV disease)

Chew gum, yawn

DO NOT hold nose & blow! May pop TM.

TM tubes placed sometimes to equalize pressure

136. Compare & contrast otitis media & otitis externa.

Definition:

OE: inflammation of membranous lining of auditory canal &/or contiguous structures of outer ear.

OM: Inflammation of structures within middle ear

Epidemiology/causes:

OE: 10-20x more likely to occur during warmer/summer months than in cooler seasons. Adults >50 = greatest risk. No ethnic or gender predispositions. Immunocompromised people at greater risk (esp of invasive disease). Excess moisture from any cause increases risk. Seborrheic dermatitis, hearing aids, ear plugs, cotton swabs all increase risk with extended use.

OM: Incidence increases in winter. Most common in very young or elderly. Native American (esp Navajo) & Native Alaskans = higher prevalence. Men & women = risk. More rare in adults. Risk factors: allergies, sinusitis, rhinitis, pharyngitis, recent/recurrent URI, perforation of eardrum, active/passive smoking.

Pathogens:

OE: *Pseudomonas aeruginosa* (most common cause of diffuse infection). *Staph aureus*. Group A strep pyogenes. Bacteroids. *Peptostreptococcus*. *Aspergillus niger*. *Pityrosporum*. *Candida albicans*.

OM: *Strep pneumoniae* (most frequent cause in adults). *H influenzae*. *Moraxella catarrhalis*. *Strep aureus* & *strep pyogenes* far less common causes.

Clinical presentation:

OE Subjective: acute, severe otalgia that may worsen at night. Worsens with pulling pinna or applying pressure to tragus. Chewing may exacerbate pain in severe cases. Initially ear may feel full/obstructed with temporary conductive hearing loss. May be pruritic. Systemic symptoms may be present with infectious etiology. Chronic illness may include dryness & pruritis of ear canal.

OE Objective: tenderness on traction of pinna, pain w/pressure of tragus. Purulent drainage may be present w/bacterial infection. Canal may be reddened & edematous. Usually lacks cerumen. Auditory canal appears edematous/erythematous. Diffuse cases may have localized pustules or furuncles in canal or external processes. Green exudate w/*Pseudomonas*. Yellow crusting in midst of purulent drainage w/*Staph*. Fungal infections have fluffy white/black malodorous carpet of growth. Allergic reactions are scaly, cracked, &/or weepy tissue. Usually no lymphadenopathy. TMJ tenderness may be present in invasive disease.

OME Subjective: Stuffiness, fullness, loss of acuity unilaterally. Pain is rare. Popping, crackling, gurgling. Rarely causes vertigo.

AOM Subjective: Deep ear pain. Fever. unilateral hearing loss. Recent URI. Dizziness. Vertigo. Tinnitus. Chronic repeated bouts of AOM.

OME Objective: external ear usually unremarkable. Mucus membranes may be infected or edematous. TM may be dull but not bulging.

AOM Objective: TM may be amber or yellow-orange. TM may be infected & pinkish gray to fiery red. TM typically full & bulging w/absent or obscured bony landmarks & cone light reflex. Discharge present if TM perf'd. Otorrhea may be purulent or mucoid. Chronic OM has perf'd, draining TM & possibly invasive granulation tissue. Lymphadenopathy or preauricular & post cervical nodes is common. If OM along with acute mastoiditis, tenderness over mastoid will be present.

Management:

OE: Localized application of heat or ice for pain. NonRx pain reliever for mild to mod

pain. Tyl #3 for severe pain. Keep ear dry. Gentle cleaning of ear canal. Eval otic discharge & edema of auditory canal & TM. Select local med appropriate for etiology. May need I&D of pustules or furuncles. Diffuse infection may be treated empirically. Topical otic preps. Abx: 1st gen cephs or pcns, 2nd gen cephs, fluoroquinolones, ceftazidime.

OM: Uncomplicated is often self-limiting. Treatment recommended for chronic or recurrent OM. Supportive treatment indicated for acceptance of pt's auditory hearing loss r/t chronic dz. If symptoms persist >12wks, 10-day abx course is warranted. Abx: amox, augmentin, 2nd/3rd gen cephs. Steroids not recommended for kids.

137. What are the characteristics of nuclear cataracts?

Significant nearsightedness
Slow, indolent course

138. What are the characteristics of cortical cataracts?

Does not significantly impair vision

139. What are the characteristics of posterior cataracts?

Creates a subcapsular haze & a severe glare in bright light