

Items From Item-Writing Workshop — 2018 Program Educators Workshop

Group 1

1. Methimazole is typically preferred to propylthiouracil (PTU) for management of hyperthyroid disease due to its reduced risk of liver dysfunction and more convenient dosing regimen. However, in which clinical situation is PTU preferred over methimazole?
 - *a. Patients in their first trimester of pregnancy.
 - b. Patients with a family history of pancreatic cancer.
 - c. Patients with congestive heart failure.
 - d. Patients with type 1 or type 2 diabetes.
2. A 56-year-old male comes to the clinic with a 3-day history of fever, chills, pleuritic chest pain, malaise, and productive cough. In the clinic, his temperature is 102.1F (38.9C) with all other vitals normal. His chest radiograph reveals consolidation in the right lower lobe. His WBC = 14,400 cells/mm³, but all other lab values are within normal limits. He is diagnosed with community-acquired pneumonia. He has not received any antibiotics in 5 years and has no chronic disease states. Which is the best empiric therapy?
 - *a. doxycycline 100 mg orally every 12 hours
 - b. cefuroxime axetil 250 mg orally every 12 hours
 - c. levofloxacin 750 mg orally every 24 hours
 - d. trimethoprim/sulfamethoxazole double strength orally every 12 hours
3. Your patient is a 40-year-old schoolteacher who complains of inability to sleep well for more than 1 year. She regularly goes to bed by 10pm but is unable to fall asleep until midnight or 1pm. As bedtime approaches, she becomes very tense and worries about the prospect of another sleepless night. "Sleep has become a real frustration. Every night, when I lie in bed, I have to try very hard to sleep. I keep watching the clock." She has no symptoms of sleep apnea, restless leg syndrome, or depression. In addition to behavioral therapy, which medication is most appropriate to prescribe temporarily, on an as needed basis?
 - a. doxepin (Sinequan)
 - b. suvorexant (Belsamra)
 - c. temazepam (Restoril)
 - *d. zolpidem (Ambien)
4. A 20 year-old male complains of a severe sore throat and left upper quadrant abdominal pain for the past 5 days. Vital signs are normal except for a temperature of 101 F. Physical exam reveals 3 plus tonsillar enlargement with erythema and exudates, anterior and posterior cervical lymph node enlargement and tenderness in the left upper quadrant of the

abdomen. Which of the following laboratory tests is most helpful in confirming the diagnosis?

- a. comprehensive metabolic panel
- b. HBsAG
- *c. heterophile agglutination antibodies
- d. rapid strep screen

Group 2

1. A 45 year old male with no significant past medical history presents to urgent care clinic with complaints of nausea, vomiting and diarrhea for 3 days to the point where he cannot keep down any solid foods and minimal fluids. His BUN is 50 and serum creatinine is 2. This is classified as what type of kidney injury?
 - a. Intrinsic renal
 - b. Post-renal
 - c. Pre-renal

2. A 36 year old obese female with past medical history significant for type II diabetes presents with an itchy, red rash under both breasts x 4 days. On physical exam you note a well demarcated, beefy red rash with satellite lesions. Which of the following is the best treatment choice?
 - a. Triamcinolone cream
 - b. Clotrimazole cream
 - c. Triple antibiotic cream
 - d. Permethrin cream

Group 3

1. An 18 year old female presents to urgent care with a 2 week history of rash that began on her left anterior thigh. It has since progressed to her back and trunk in the past 3 days. Patient states that the rash begins to itch when she takes a shower. Vital signs are within normal limits. Physical exam reveals a lesion on left anterior thigh that is about 2 cm in diameter with a central clearing and an erythematous border. The back and trunk show scattered maculopapular lesions of variable size from 0.5 cm to 1.5 cm. What is the best treatment option for this patient?
 - a. Reassurance. No treatment needed.
 - b. Oral doxycycline
 - c. Topical terbinafine
 - d. Initiate PUVA (ultra-violet light therapy)

Group 4

1. A 19-year-old man presenting the emergency department with green penile discharge and mild dysuria for three days. He admits to unprotected intercourse with a new sexual partner. What is the most likely diagnosis?

- (a) Chlamydia
- (b) Gonorrhea*
- (c) Syphilis
- (d) Trichomoniasis

2. A 59-year old woman presents to the urgent care with generalized myalgias, fatigue, and maximum temperature of 101 degrees Fahrenheit orally, non-productive cough, mild abdominal upset and nausea for two days. Radiography of chest demonstrated no abnormalities. What is the best treatment option?

- (a) Acyclovir
- (b) Azithromycin
- (c) Doxycycline
- (d) Oseltamvir*

3. A 42-year old woman presents with worsening dental pain for seven days. Physical exam reveals multiple caries with a broken tooth #17 and erythema and swelling of the associated gingiva. The patient is allergic to penicillin, which gives a generalized rash. What is the best treatment option?

- (a) azithromycin
- (b) clindamycin*
- (c) doxycycline
- (d) erythromycin

Group 5

1. A 68 year old Caucasian male presents to the ER complaining of fatigue and severe right sided groin pain x 2 days. He has a history of Type 2 Diabetes Mellitus and Hypertension. His current medications include metformin, canagliflozin, hydrochlorothiazide and losartan. His vital signs are as follows: Temp 101.2F orally, BP 98/67, HR 120, RR 22. The physical exam reveals tenderness to the genitalia with dusky erythema, edema, and necrosis extending to the right side of his scrotum and the shaft of his penis. Which of the following medications most likely contributes to this patient's disorder?

- *A. Canagliflozin
- B. Hydrochlorothiazide

- C. Losartan
- D. Metformin

Source:

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Group 6

1. A 29-year-old G1P1 just delivered vaginally 30 minutes ago. She had an uncomplicated delivery except for a 2nd degree tear in the perineum which was repaired without difficulty and hemostasis was noted following the repair. Her BP is now 60/40 and she is tachycardic and becoming rapidly difficult to arouse. Of the following, what is the **MOST LIKELY** diagnosis?
 - a. Uterine atony*
 - b. Bleeding from the episiotomy site
 - c. Retained placental products
 - d. Endometritis

2. A 75 year old male presents to the office complaining of extremely painful lesions on his back. The physical examination shows a vesicular rash on an erythematous base in a single dermatomal pattern. Which of the following is **MOST LIKELY** the cause of this rash?
 - a. Human herpes virus 6
 - b. Parvovirus B19
 - c. Herpes simplex virus 1
 - d. Coxsackie virus
 - e. Varicella zoster virus*

3. A 72 year old man comes to the medical clinic complaining of redness on the left side of his face for the past 36 hours, malaise and myalgia. Physical examination shows a temperature of 102°F, pulse 116, respirations of 18 and blood pressure of 110/79. Skin examination shows left-sided facial rash that is sharply demarcated, raised, and deeply erythematous. Upon further investigation, you note that the rash is painful, and has an “orange-peel” look to it. Which of the following is the **MOST APPROPRIATE** therapeutic intervention?
 - a. Prescribe a 10-day course of oral antibiotics and have the patient return to clinic for follow-up in two weeks
 - b. Prescribe a topical antibiotic for the rash and an antipyretic for the fever, and follow-up in one week
 - c. Admit the patient to the hospital for intravenous antibiotics, blood work and further management*
 - d. Reassure the patient that the rash will clear in a few days with rest, an analgesic and topical antibiotics

4. A 61-year-old G4P2113 reports to your office with complaints of vulvar itching that has worsened over the last 6 months. She has been seen previously for the same issue and was prescribed topical corticosteroids which have not provided any relief. Which of the following is the next best step in the management of her condition?
- Biopsy of the vulva *
 - Increase the potency of the topical corticosteroid
 - Add an antihistamine to her topical corticosteroid regimen
 - Advise topical estrogen therapy

Group 7

1. A 28-year-old male patient presents to the clinic with an extremely pruritic, blistering rash on both arms that suddenly appeared after completing yardwork yesterday. He has tried over the counter diphenhydramine for his symptoms with minimal relief. Which of the following steroid regimes would be the best treatment for this patient?
- Administer a one-time bolus of IV methylprednisolone
 - Prescribe a tapering methylprednisolone dose pack over six days
 - Administer IM dexamethasone with a second dose in three days
 - Prescribe a tapering dose of prednisone over two to three weeks*
2. A 24-year-old female presents to the urgent care with complaints of dysuria, vulvar itching, and pain when having sex for the past 5 days. On exam, there is a watery vaginal discharge with friable tissue around the cervical os. Her pregnancy test is positive and there is no evidence of gram-negative diplococci on the gram stain. KOH and wet prep are within normal limits. She has no allergies to medications. Which of the following medications is most appropriate for this patient?
- Doxycycline
 - Azithromycin*
 - Ceftriaxone
 - Levofloxacin
3. A 65-year-old male with benign prostatic hypertrophy presents with seasonal allergies. Which of the following medications is contraindicated?
- Fexofenadine*
 - Montelukast
 - Ipratropium
 - Omalizumab

4. When prescribing exenatide (Byetta), which of the following side effects is most common?
- a. Constipation
 - b. Diarrhea
 - c. Nausea*
 - d. Abdominal pain

Group 8

1. A 27-year-old female comes into your family practice office concerned that she has been unable to conceive after 2 years of unprotected intercourse. She reports a 5-6-year history of severe menstrual cramps and mild chronic pelvic pain that is gradually worsening. Pelvic exam is unremarkable except for bilateral adnexal tenderness. Which of the following would most likely provide a definitive diagnosis?

- A. transvaginal ultrasound
- b. hysterosalpingogram
- c. colposcopy
- d. pelvic CT scan
- e. laparoscopy

Group 9

1. An 84 year old woman is brought to her PCP's office by her daughter for frequent falls, particularly at night. She also endorses intermittent tingling in her feet. Her physical exam reveals that vital signs are within normal limits and no abnormalities are found on exam of the head and neck, heart, lungs, abdomen and lower extremities with the exception of a decrease in vibratory sensation in her lateral malleolus bilaterally. The remainder of her neurologic exam is normal for her age. If a vitamin deficiency is ultimately found to be responsible for the patient's symptoms, what finding is most likely to be seen on the CBC?
- a. Hyposegmented neutrophils
 - b. Leukopenia
 - c. A macrocytic anemia
 - d. Thrombocytopenia
 - e. Thrombocytosis
2. A 16 year old male patient complains of chronic dry skin and severe pruritis especially in the creases of his elbows and knees. On physical exam you note areas of lichenification in the flexor surfaces of his extremities and the back of the neck. Which of the following elements of the patient history will most strongly support your diagnosis of atopic dermatitis?
- a. He swims competitively year round
 - b. His mother has recently changed laundry detergent
 - c. His dog has fleas and sleeps in his bed
 - d. He has a family history of asthma and allergic rhinitis

Group 10

1. A 65-year old male comes in for follow up for acute sinusitis. The patient has a history of well-controlled HTN. Today's office BP is 151/89. Which of the following medications could cause an elevation in BP?
 - A) Pseudoephedrine (Sudaphed) *
 - B) Acetaminophen (Tylenol)
 - C) Ocean Nasal Spray (Saline)
 - D) Amoxicillin (Augmentin)
 - E) Diphenhydramine (Benadryl)
2. Mrs. Burton was diagnosed with essential hypertension 10 years ago. Which of these are consistent with a diagnosis of essential hypertension?
 - A) excessive daytime sleepiness
 - B) 3+ proteinuria
 - C) age 29 at onset
 - D) S2 split during inspiration *
 - E) episodes of flushing and palpitations
3. Which of these physical exam findings can be normal in a hypertensive patient?
 - a. Asymmetric femoral pulses
 - b. 4 cm wide abdominal aortic pulsation
 - c. Renal bruit in a 40 year old
 - *d. S3 gallop in a 35 year old
 - e. 3 cm PMI located in the left 5th intercostal space, anterior axillary line
4. At the time of her initial diagnosis, which of these tests is considered routine lab testing for the initial work-up of hypertension?
 - a. urine drug screen
 - b. Liver function tests (or dexamethasone suppression if resources demonstrate LFTs as initial workup)
 - c. CKMB
 - * d. Urinalysis
 - e. Serum aldosterone
5. As standard of care the following procedure was performed as part of a routine initial evaluation when Ms. Burton was first diagnosed with hypertension 10 years ago, at the age of 42?
 - a. Echocardiogram
 - *b. Electrocardiogram
 - c. Renal ultrasound
 - d. Aortic angiogram
 - e. Ankle brachial index

Group 11

1. An 85-year-old female with past medical history of hypertension, hyperlipidemia and osteoporosis presents to the ER with a 4-day history of shortness of breath and pleuritic chest pain. Her vital signs include a temperature of 99.4F, respirations of 28 rpm, heart rate of 98 bpm, BP of 140/92 mmHg, and pulse ox of 94% on 3L of oxygen via nasal cannula. At CT scan confirms that she has multiple small bilateral pulmonary embolisms. What is the most appropriate initial treatment for this patient?
 - a. Clopidogral (Plavix)
 - b. Low-molecular weight heparin (Lovenox)
 - c. Unfractionated heparin
 - d. Warfarin (Coumadin)
 - e. tPA

Group 12

1. A 40-year old female presents to the primary care clinic with recent weight gain of 35 lbs. in the past 3 months, despite increased exercise and appropriate diet. Patient's past medical history is noncontributory, and her last menstrual period was 2 weeks ago and normal. Upon physical examination, you notice a protuberant abdomen with violaceous striae, and increased fat deposition to the base of the neck. Vital signs are 156/90 mmHg, pulse 90 and regular, respirations 16 and regular, temperature 98.6 F. Which of the following lab results will be most helpful in forming the presumed definitive diagnosis?
 - a. **24-hour urine for cortisol and serum ACTH**
 - b. Urine hCG and serum estrogen level
 - c. Fasting blood glucose and urine microalbumin
 - d. Serum TSH and serum free T4 levels
 - e. Urine free catecholamines and urine creatinine
2. A 24-year female presents to the emergency department with difficulty swallowing. She states she's had a mild sore throat for the past 7 days, but did not seek medical care. Approximately 12 hours ago, she developed severe, left-sided pain in her throat and states she cannot swallow food or drink. When speaking with the patient, you notice her voice seems muffled. Vital signs are 120/68 mmHg, pulse 110 bpm, respirations 20/min, temperature 101.6 F. Upon examination of the oropharynx, you note unilateral left-sided swelling of the soft palate with a displacement of the uvula to the right. The remainder of the patient's physical exam is unremarkable. Which of the following is the most likely diagnosis?
 - a. Viral pharyngitis
 - b. Ludwig angina
 - c. **Peritonsillar abscess**
 - d. Epiglottitis
 - e. Infectious mononucleosis

3. A 68-year old female presents to the primary care clinic with fatigue and a tingling sensation in her feet for the past 6 months, which has gradually worsened over the past few weeks. She has not seen her physician in the past two years. The patient denies cold intolerance, dryness to hair/skin, constipation, or any signs of GI bleeding. Her past medical history is positive only for hyperlipidemia, which she manages with a vegan diet. Vital signs are within normal limits. Which of the following physical exam findings are you most likely to find in this patient?
- Decreased vibratory sensation to the bilateral lower extremities**
 - Scleral icterus and jaundice noted to palms and soles
 - Thinning of lateral eyebrow hair
 - Fruity breath and body odor
 - Proximal muscle weakness noted in both upper and lower extremities
4. A 48-year old Caucasian male presents to the primary care office for a follow-up visit for hypertension noticed on his annual physical exam 3 weeks ago. Over the past 3 weeks, he states he's been following his doctor's recommendation on diet and exercise as well as limiting his caffeine intake. The patient's past medical history is negative. His original blood pressure reading was 155/92 mmHg at the last visit, and today his blood pressure is 150/94 mmHg. His remaining vital signs and BMI are within normal limits. Which of the following medications is considered first-line therapy for this patient?
- Hydrochlorothiazide**
 - Lisinopril
 - Metoprolol
 - Verapamil
 - Clonidine
5. Elevation of which of the following hormones is mandatory for ovulation to occur?
- Estrogen
 - Luteinizing hormone**
 - Progesterone
 - Follicle-stimulating hormone
 - Inhibin
6. Which of the following conditions affects up to 16% of population and leads to intermittent icterus and elevation of total and indirect bilirubin?
- Gilbert syndrome**
 - Crigler-Najjar syndrome
 - Rotor syndrome
 - Dubin-Johnson syndrome
 - Cushing's syndrome
7. A 22-year old female comes in with a chief complaint of bilateral hand rash. She describes the rash as very itchy and annoying. On exam, you see small "clear tapioca like vesicles" on the sides of her fingers on both hands. She states it goes through cycles and sometimes

appears dry red and scaly after these bumps resolve. She admits to recently starting a job as a bartender and that her hands are frequently in water. Which of the following is the most likely diagnosis?

- a. **Dyshidrotic eczema**
- b. Psoriasis vulgaris
- c. Seborrheic dermatitis
- d. Erythroderma

Group 13

1. A 69 y/o woman presents to the hospital for an elective surgery. On day 5 post-surgery, she becomes confused. Her vitals are HR 115/min, respiration rate 25/min. Her leukocyte count is 16,000/ μ L (normal less than 12,000/ μ L) with greater than 10% bands. You diagnose the patient with systemic inflammatory response syndrome. Which of the following is most responsible for presenting symptoms?

- A. IL-1 and IgE
- *B. IL-1 and TNF-alpha
- C. IL-2 and IgE
- D. IL-2 and IgG
- E. IL-3 and TNF-alpha

2. A 40 y/o male construction worker presents to the clinic complaining of constipation and loss of sensation in the perineal area. PMH is pertinent for chronic low back pain. Vitals are within normal limits. Physical exam findings show decreased muscle strength in the left lower extremities, hyporeflexia (patellar and Achilles). What would be the most important review of system finding to indicate emergency management?

- A. Lower extremity numbness
- B. Lower extremity hypoesthesia
- C. Painful urination
- D. Sciatic pain
- E. *Urinary incontinence

3. A 32 y/o female presents to the clinic with right sided headache x 3 days, nausea and one time vomiting. The severity of the headache has been increasing over the past three days. No relief with ibuprofen which was previously effective with similar episodes. Her vitals are within normal limits. Physical exam findings are unremarkable. A recent MRI was negative. Which of the following is the most appropriate step in management?

- A. *Ergotamines
- B. Hydration
- C. NSAIDs
- D. Opioids
- E. Oxygen

Group 14

1. A 32 y/o female with Type II diabetes mellitus presents to the emergency department with complaints of nausea and fatigue for 48 hours. She is alert and oriented. Vitals reveal a heart rate 98 beats per minute, regular rate and rhythm; blood pressure 102/86 mmHg; respiratory rate 12 breaths per minute, non-labored. Temperature 98.8°F (oral). Physical exam reveals dry mucous membranes otherwise without abnormalities.

Current Labs indicate:

Serum pregnancy – negative

Fasting Glucose – 456 mg/dL

A1C – 11

Anion gap - 12

CBC – within normal limits

UA - 4+ glucose; + ketones

What is the most appropriate initial treatment?

- A. Glargine
- B. Liraglutide
- C. Metformin
- D. Normal Saline

*** Question: Are lab values necessary to complete this question?

Group 15

1. 48-year-old male presented to the emergency room complaining of 2 hours of chest pain. He was working in his yard moving a heavy stone when he suddenly developed severe substernal pain radiating to his back, which he describes as “tearing” in quality. He has a history of hypertension and hyperlipidemia for which he takes chlorthalidone 12.5mg daily and simvastatin 10mg daily. Vital signs showed BP 170/92 mmHg, HR 115, RR 20, temp 37.1, room air sat 97%. Exam was notable for diaphoresis and obvious distress. His lungs were clear and cardiac exam was regular and tachycardic with normal S1 and S2 with a III/VI diastolic decrescendo murmur at the left lower sternal border. Chest radiograph showed clear lungs and widening of the mediastinum. ECG showed sinus tachycardia at 115, left ventricular hypertrophy, and no ST-T wave changes. Labs showed a troponin level of <0.01 (<0.10). Which of the following is the most likely diagnosis?
 - A. Muscle strain
 - B. Myocardial infarction
 - C. Pericarditis
 - D. *Aortic dissection
 - E. Pulmonary embolism

Group 16

1. A 45 year-old white female presents to the family practice clinic for her annual examination. Past medical history is significant for Type 2 diabetes that has been well controlled for three years with Metformin 1000 mg bid. Lifestyle modifications have not been successful for this patient. She reports that her morning finger stick glucose levels have been 200 on average over the last 6 months. Vital signs are significant for a BMI of 38. Her Hemoglobin A1C is 9.1% mg/dL. Which of the following would be the next best treatment option for this patient?

- a. pioglitazone
- *b. exenatide (Byetta)
- c. glyburide
- d. insulin glargine (Lantus)

2. A 38 year-old white female presents to the emergency room with sudden onset shortness of breath that began six hours prior to her arrival. She denies chest pain or palpitations. Past medical history is significant for asthma. Medications include drospirenone/ethanyl estradiol (Yaz), multivitamin and levoalbuterol (Xopenex). Vital signs include HR of 110, BP 142/94, RR of 22, and Pulse Oximetry of 92%. Physical examination reveals lungs clear to auscultation bilaterally, heart with regular rate and rhythm with no murmurs, gallops, or rubs. Which of the following diagnostic tests would provide the most definitive diagnosis for this patient?

- a. Chest radiograph
- b. Spirometry
- c. Spiral chest CT
- d. D-dimer
- e. V/Q scan