

QUESTION 1

1. Mr. Jeffers was admitted 2 days ago for a carotid endarterectomy. A Foley catheter was inserted intraoperatively and remains in place. His urine output has declined markedly despite continued IV fluid infusion. Today his morning labs reveal a BUN of 19 mg/dL and a creatinine of 2 mg/dL. A leading differential includes:

- A. Foley lodged in the urethra causing post-renal failure
- B. Decreased renal perfusion causing prerenal failure
- C. Age-related decreased eGFR causing prerenal failure
- D. Post-surgical rhabdomyolysis causing intrarenal failure

Answer:

- **D. Post-surgical rhabdomyolysis causing intrarenal failure**

During surgery, muscles and injured. This can result into rhabdomyolysis, which is the breakdown of muscles to release proteins. The excess proteins causes an increased level of creatinine.

Mr. Jeffers is from surgery (post-surgical) and his creatinine levels are above normal. The normal creatinine levels range from 0.6mg/dl to 1.2mg/dl. Thus, the most likely differential is: **Post-surgical rhabdomyolysis causing intrarenal failure.**

1 points

QUESTION 2

1. Janet is admitted with symptomatic tachycardia. Her pulse is 160 b.p.m. and she is weak, diaphoretic, and anxious. Physical examination reveals a 5'4" 107 lb black female who is awake, alert, and oriented, anxious, with moist skin and racing pulse. Her blood pressure is 140/100 mm Hg. Temperature and respiratory rate are within normal limits. The patient admits to having a "thyroid condition" but she never followed up on it when she was advised to see an endocrinologist. The AGACNP anticipates a diagnosis of:

- A. Hashimoto's thyroiditis
- B. Cushing's syndrome
- C. Grave's disease
- D. Addison's disease

1 points

Answer:

- C. Grave's disease

QUESTION 3

1. Systemic lupus erythematosus (SLE) is a multiorgansystem autoimmune disorder that can present with a wide variety of manifestations. Which clinical triad should prompt an evaluation for SLE?

- A. Fever, normal white count, elevated sedimentation rate
- B. Hyperkalemia, hyponatremia, low blood pressure
- C. Leukocytosis, hyperglycemia, hypokalemia
- D. Joint pain, rash, fever

1 points

QUESTION 4

1. A patient presents with profound vertigo of acute onset yesterday. She can barely turn her head without becoming very vertiginous; she is nauseous and just doesn't want to move. This morning when she tried to get out of bed she felt like she was pushed back down. The vertigo is reproducible with cervical rotation. The patient denies any hearing loss or tinnitus, she has no fever or other symptoms. The AGACNP knows that the most helpful intervention will probably be:

- A. Meclizine
- B. Diazepam
- C. Bed rest
- D. Epley's maneuvers

1 points

Answer:

- **D. Epley's maneuvers**

The patient is likely suffering from benign paroxysmal positioning vertigo. This is indicated by inability to turn her head and to get up from the lying position in bed. The best intervention for benign paroxysmal positioning vertigo is **Epley's maneuvers**. These maneuvers effectively clear the inner ear to relieve symptoms of vertigo

QUESTION 5

1. Mrs. Mireya is an 85-year-old female who is admitted for evaluation of acute mental status change from the long term care facility. She is normally ambulatory and participates in lots of facility activities. Today a nursing assistant found her in her room, appearing confused and disconnected from her environment. When she tried to get up she fell down. Her vital signs are stable excepting a blood pressure of 90/60 mm Hg. The AGACNP knows that the most likely cause of her symptoms is:

- A. Osteoarthritis
- B. Drug or alcohol toxicity
- C. Hypotension
- D. Urosepsis

1 points

QUESTION 6

1. A patient with SIADH would be expected to demonstrate which pattern of laboratory abnormalities?

- A. Serum Na⁺ 119 mEq/L, serum osmolality 240 mEq/L, urine Na⁺ of 28 mEq/L, urine osmolality of 900 mOsm/kg
- B. Serum Na⁺ 152 mEq/L, serum osmolality 315 mEq/L, urine Na⁺ of 5 mEq/L, urine osmolality of 300 mOsm/kg
- C. Serum Na⁺ 121 mEq/L, serum osmolality 290 mEq/L, urine Na⁺ of 7 mEq/L, urine osmolality of 850 mOsm/kg
- D. Serum Na⁺ 158 mEq/L, serum osmolality 251 mEq/L, urine Na⁺ of 20 mEq/L, urine osmolality of 420 mOsm/kg

Answer:

Syndrome of inappropriate anti diuretic hormone is characterized by dilutional hyponatremia. Serum sodium levels lower than 130mmol/L and urine osmolality less than 100mmol/L. Urine sodium is less than 30mmol/L. Serum level of sodium is likely to be 121

1 points

QUESTION 7

1. Sean is a 29-year-old male who presents to the emergency department for evaluation and treatment of foreign body in the eye. Ophthalmic anesthesia is achieved and removal is attempted unsuccessfully with a moist cotton tipped swab. A wet fluorescein stain is applied to the lower eyelid, and a corneal abrasion ruled out but the AGACNP notes a positive Seidel sign. This indicates:

- A. Penetration of the cornea with resultant aqueous leak
- B. A rust ring remnant due to metal foreign body
- C. An elevated intraocular pressure
- D. Paradoxical pupil dilation in response to light

1 points

Answer:

- **A. Penetration of the cornea with resultant aqueous leak**

A positive Seidel sign indicates a leakage from the anterior chamber into the cornea. It is used to diagnose corneal disorders such as corneal perforation and corneal degeneration.

The AGACNP should therefore suspect **Penetration of the cornea with resultant aqueous leak** as indicated by the positive Seidel sign.

QUESTION 8

1. Mrs. Lowen is an 82-year-old female who comes to the emergency department for evaluation of a fever of 102.9° F. She complains of a headache in the right side of her temple and some right-sided jaw pain. A urinalysis, chest radiograph, complete blood count (CBC) and 12-lead ECG are all non-contributory. A comprehensive metabolic panel is significant only for a slightly elevated BUN and creatinine. The AGACNP appreciates distinct right temple tenderness to percussion. Which laboratory test is necessary to support the suspected diagnosis?

- A. An erythrocyte sedimentation rate
- B. A white blood cell differential
- C. Two sets of blood cultures
- D. Echocardiography

Answer:

- **A. An erythrocyte sedimentation rate**

Mrs. Lowen's most likely diagnosis is temporal arteritis, also known as, giant cell arteritis. The disease presents with one-sided temporal headache accompanied with jaw pain, fatigue and tenderness at the temples. The main diagnostic tests for temporal arteritis are **erythrocyte sedimentation rate** and C-reactive protein levels

1 points

QUESTION 9

1. Ms. Schiebel, a 31-year-old female who is brought to the emergency department by police after being arrested for disruptive behavior in a public establishment. The differential diagnosis includes drug and alcohol ingestion/toxicity, central nervous system disease, severe trauma, and psychotic illness; ultimately the alcohol and toxicology screen as well as head imaging are negative. When considering psychotic illness, the AGACP knows that this is a physiologic imbalance that typically involves an excess of:

- A. Serotonin
- B. Norepinephrine

C. Acetylcholine

D. Dopamine

Answer:

- **B. Norepinephrine**

Since Mr. Schiebel has been arrested for disruptive behavior, he most likely suffers from maniac behavioural disorder. Mania is a physiological imbalance disorder characterized by excessively high levels of norepinephrine.

1 points

QUESTION 10

1. Mr. Lincoln is a 55-year-old male who was admitted for management of sepsis secondary to pneumonia. He has declined rapidly, and today chest radiography demonstrates a diffuse, bilateral "white-out" appearance. His paO_2 is 55 mm Hg. In order to increase his oxygenation the AGACNP knows that which of the following interventions is indicated?

A. Increased FiO_2

B. Increased respiratory rate

C. Increased tidal volume

D. Increased PEEP

Answer:

- **C. Increased tidal volume**

Tidal volume refers to the maximum amount of air that can be inhaled or exhaled during breathing. When the amount of tidal volume increases, the amount of oxygen that is inhaled into the lungs also increases. This results into an increase in the diffusion gradient and a subsequent increase in the rate of diffusion of oxygen into the lungs. Therefore, the patient's (Mr. Lincoln's) oxygenation will improve and his paO_2 will rise/improve when his tidal volume is increased

1 points

QUESTION 11

1. A 29-year-old female patient presents with a complaint of palpitations. Physical examination reveals an essentially healthy female with no significant medical history and no maintenance medications; the only thing she can report is that she had a head cold a week or so ago. The vital signs include a blood pressure of 139/90 mm Hg, pulse of 105 b.p.m, respiratory rate of 16 b.p.m. and a temperature of 98.6° F. The only abnormal finding on physical examination is diffuse anterior neck tenderness with thyroid palpation. The AGACNP considers which medication for symptom control?

A. Ibuprofen

- B. Pseudoephedrine
- C. Propranolol
- D. Methimazole

Answer:

Excessive thyroid hormone causes thyrotoxicosis which is characterized by increased basal metabolic rate, increased appetite and emotional lability. Hyperactivity of the thyroid gland causes its enlargement. Management of this condition is by anti thyroid drugs. An example is methimazole which is a thioamide that acts by inhibiting thyroid peroxidase they also block coupling of iodotyrosines.

1 points

QUESTION 12

1. Jennifer is an 18-year-old homeless female who was found unresponsive. She was admitted to the hospital for management of severe bleeding after a spontaneous abortion escalated to a uterine hemorrhage. An underlying infection and dehydration were corrected and nutritional supplements were started. Her volume status is stable, morning labs were all within normal limits and she is to be discharged today. When the AGACNP enters the room to prepare the patient for discharge, she finds her agitated, pale, and diaphoretic with vital signs to include a pulse of 105 bpm, respirations of 24 bpm, blood pressure of 110/76 mm Hg and a temperature is 97.9° F. The most appropriate action would be to:

- A. Order a CBC to assess for recurrent bleeding
- B. Request and abdominal CT to assess for bleeding
- C. Evaluate the patient for anxiety/panic attack
- D. Prescribe alprazolam 1 mg now

Answer:

- **D. Prescribe alprazolam 1 mg now**

Alprazolam is a benzodiazepine used to treat anxiety and panic attacks. Jennifer seems to be having a panic attack since her respiratory rate and pulse are elevated. Her blood pressure is however within the normal range, which rules out bleeding. If she was bleeding, then her blood pressure would be below normal. It is important to immediately give her **alprazolam** then later on after she has calmed down, evaluate her for anxiety disorders.

1 points

QUESTION 13

1. Physical examination findings in a patient with pneumothorax is likely to reveal:

- A. Increased tactile fremitus

- B. Low grade temperature
- C. Hyperresonance to percussion
- D. Egophany

Answer:

- **C. Hyperresonance to percussion**

In pneumothorax, the lung is collapse and air is trapped within the pleural cavity. The presence of trapped air in the pleural cavity increases the resonance heard during percussion. It is the trapped air that causes **Hyperresonance to percussion** of the lungs during physical examination of patients with pneumothorax.

1 points

QUESTION 14

1. Mr. Parker brings his 73-year-old wife to a clinic appointment because he is worried about her. She has a long history of hypertension and dyslipidemia, but he says she has taken medication for years and everything has been OK. His concern today is that for a long time she has been very forgetful, and he has tried to help her by keeping a strict routine around the house. Over the past few months, she just seems more and more forgetful, does not seem interested in doing anything, and now seems to be forgetting how to do simple everyday tasks. Yesterday she could not figure out which dollar bills to use at the store to pay the cashier. The AGACNP knows Mrs. Parker should first be screened for:

- A. Depression
- B. A brain tumor
- C. Hypothyroidism
- D. Adrenal dysfunction

Answer:

- **C. Hypothyroidism**

Hypothyroidism is associated with both hypertension and dyslipidemia. It is known to cause difficulty in concentration and memory problems. Mrs. Parker has a medical history of hypertension and dyslipidemia. She also presents with memory problems. It is therefore important to screen her for hypothyroidism which is a likely diagnosis from her medical history.

1 points

QUESTION 15

1. M.R. is a 40-year-old female who has a known history of peptic ulcer disease. She has been admitted through the emergency room with a diagnosis of GI bleeding—she is vomiting dark blood and had a nasogastric tube placed. When attached to low intermittent suction it initially drained 400 cc of

dark brown/black drainage, but now it is starting to drain lighter red colored blood. The AGACNP knows that immediate priorities of care include:

- A. Ensuring hemodynamic stability
- B. Beginning a parenteral proton pump inhibitor
- C. Beginning gastric lavage
- D. Ordering a gastrointestinal consult

Answer:

- **A. Ensuring haemodynamic stability**

The emergency care for patients should start with: Assessing airway, breathing and circulation. Hemodynamic stability is part of circulation. Thus, the immediate priorities of care for the patient, from the options given, is **Ensuring haemodynamic stability**.

1 points

QUESTION 16

1. A patient with sharp, stabbing chest pain directly over the precordium has a 12-lead ECG that demonstrates concave ST-T wave elevations in leads II, III, avR, avL, avF, and all six precordial leads. The AGACNP expects which physical finding?

- A. A grade IV/VI systolic murmur with radiation to the axilla
- B. A split S2 that increases with inspiration
- C. A pericardial friction rub
- D. An S4 heart sound

Answer:

- **C. A pericardial friction rub**

A sharp, stabbing, chest pain associated with concave ST-T wave elevations in leads II, III, avR, avL, avF and all the six precordial leads, suggest a diagnosis of pericarditis. Acute pericarditis is diagnosed by the presence of a pericardial friction rub. The AGACNP should therefore expect **A pericardial friction rub**, since the patient most likely has pericarditis.

1 points

QUESTION 17

1. J.Q. is a 45-year-old male who had gastric bypass surgery 18 months ago. A CBC reveals a macrocytic anemia with aHgb of 9.8 g/dL, HCT of 30%, MCV of 115 and RDW of 19%. The AGACNP suspects which type of anemia?

- A. Iron deficiency
- B. Sickle cell anemia
- C. Pernicious anemia
- D. Anemia of chronic disease

Answer:

- **C. Pernicious anaemia**

In the stomach, food mixes with intrinsic factor which increases the absorption of vitamin B12 in the ileum. However, in patients with gastric bypass, food does not get into the stomach, thus, the food does not mix with intrinsic factor. Subsequently, there will be decreased absorption of vitamin B12. Inadequate levels of vitamin B12 causes pernicious anaemia. This type of anaemia (pernicious anaemia) presents with low haemoglobin count, low hematocrit and an elevated MCV. Since J.Q has a medical history of gastric bypass surgery, low haemoglobin count, low hematocrit and an elevated MCV, the AGACNP suspects pernicious anaemia.

1 points

QUESTION 18

1. Megan K. is a 21-year-old female who presents complaining of irritated eyes. She says this happens a couple of times a year and this time it is really a problem. Both eyes are itchy and red and she has a lot of stringy discharge, especially at the end of the day. Her visual acuity is 20/25 OS, OD, and OU with her glasses on. Physical exam reveals injected conjunctiva bilaterally but there is no photophobia. Pupils are equal, round, briskly reactive, and accommodate. The AGACNP knows that immediate treatment should include ophthalmic application of:

- A. Steroids
- B. Antihistamine
- C. Antibiotic
- D. Cycloplegic

1 points **Answer:**

- **C. Antibiotic**

Megan most likely has bacterial conjunctivitis. Conjunctivitis is often recurrent and occurs bilaterally. The diagnosis of conjunctivitis is supported by Megan's red itchy eyes, bilaterally, which occurs on-and-off. The stringy discharge indicates that the infection is bacterial. Thus, the immediate treatment should include antibiotic therapy.

QUESTION 19

1. Ellen is a 61-year-old female who presents with a chief complaint of neck pain. The history of present illness reveals that Ellen felt as though a bug bit her behind the neck a few days ago. A day or two later it started to hurt, and when she began to pick at it she felt drainage come out. She is here now for evaluation. Physical exam reveals an 8 cm x 8 cm draining abscess in the right post auricular region with posterior cervical lymphadenopathy. Ellen has a temperature today of 101.9° F. The AGACNP knows that in addition to incision and drainage of the abscess, effective management must include:

- A. Systemic antibiotics
- B. Tetanus immune globulin
- C. Tetanus toxoid
- D. Antipyretics

Answer:

- **A. Systemic antibiotics**

Ellen's body temperature is high; she has a fever which suggests an infection. This means that the infection has infiltrated into her systemic circulatory system. Also, the lymphadenopathy suggests that her lymphatic system is affected. Thus, it is important to give her systemic antibiotics in addition to performing an incision and drainage.

QUESTION 20

1. A 13-year-old male presents with a chief complaint of ear drainage. The patient and his mother both indicate that the patient has not had any pain or any systemic complaints, but the pus-like discharge from the ear is very persistent. According to Mom they went to a retail clinic two weeks ago and the patient was prescribed both oral antibiotics and ear drops, but it didn't help. Physical exam of the ear reveals a painless pinna; otoscope exam reveals only a large amount of mucopurulent drainage—the tympanic membrane could not be visualized. The AGACNP knows the diagnosis is most likely:

- A. Acute otitis media
- B. Acute otitis externa
- C. Cholesteatoma
- D. Otitis media with effusion

Answer:

- **A. Acute Otitis Media**

Middle ear infections such as acute otitis media do not respond to antibiotics or eardrops. They often resolve on their own.