



UNITED REPUBLIC OF TANZANIA
MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT,
GENDER ELDERLY AND CHILDREN
THE MEDICAL COUNCIL OF TANZANIA



PRE-INTERNSHIP EXAMINATION FOR DOCTOR OF MEDICINE DEGREE

DATE: OCTOBER 13, 2021

TIME: 9:00 – 12:00 Hours

CODE; 2021MD008

INSTRUCTIONS

1. This examination consists of 53 printed pages with 150 multiple choice questions
2. Answer all questions
3. Use the answer sheets provided to shade the most correct answer in the corresponding letters
4. Use a pencil or black ink pen
5. Cellular phones, calculators and other unauthorized materials are not allowed in the examination room
6. Write your MCT examination number in each page of your both question and answer sheets

1. Mr. Massawe is a 38-year-old man with alcoholic liver disease presented to the District hospital with haemetemesis and he had mild epigastric pain. On examination, he had spider naevi over his chest wall and was clinically jaundiced. There was no hepatomegaly and no ascites on examination. His heart rate was 110 bpm, blood pressure 90/50 mmHg, respiratory rate 20bpm and oxygen saturation 96% on room air. Investigations: Hb 11 g/dL, WBC $10.5 \times 10^9/L$, Plts $35 \times 10^9/L$, INR 1.4, APTT 44s and Fibrinogen 1.9 g/L. What is the most appropriate way to manage his coagulopathy?
 - A. Cryoprecipitate
 - B. Fresh frozen plasma
 - C. Platelet transfusion
 - D. Prothrombin complex concentrate
 - E. Vitamin K

2. A 65-year-old male presents to the neurology outpatient department with a history of recurrent bouts of unsteadiness and vomiting over the last 10 years, with partial resolution. He has also had episodes of visual problems, which he describes as the sudden loss of vision in the right eye, with an almost complete recovery of vision over the course of the next few weeks. He has a history of type 2 diabetes and is hypertensive and is generally non-compliant with his treatment. He is also a smoker with a 50-pack years history. His medication includes glimepiride 2mg daily and metformin 500mg TDS. He also takes telmisartan 40mg daily. On examination, he has nystagmus in the right eye with the fast component towards the right. His gait is ataxic and he has evidence of spasticity in both lower limbs with exaggerated reflexes and bilateral ankle clonus. Fundoscopic examination revealed a pale optic disc. MRI brain shows diffuse lesions in multiple sites. The report queried demyelinating plaques vs multiple infarcts. Which of the following would be the most appropriate next investigation?
 - A. MRI spinal cord
 - B. CSF examination for oligoclonal bands
 - C. MR angiography of the verterbrobasilar system
 - D. Titres of anti-Hu antibodies
 - E. Visual evoked potentials

3. You are called by a nurse to review a patient in the stroke ward. He is a 75years old who suffered from a right sided intracerebral hemorrhage the previous day. The nursing staff were concerned due to a decreased conscious level. On examination you note a right sided dilated pupil and a left sided hemiparesis. His Glasgow coma score is 13 (M5, V4, E4). What is the most likely diagnosis?
- A. Tonsillar herniation
 - B. Transtentorial herniation
 - C. Subfalcine herniation
 - D. Central herniation
 - E. Uncal herniation
4. Mr. Mkali, a 47-year-old man is referred from ED with increasing shortness of breath. He is a known HIV patient managed by the local general practitioner. He is not on any antiretroviral treatment. He presents with a two-week history of worsening shortness of breath and he is now breathless on minimal exercise. He has a non-productive cough and has felt lethargic for the last week. On examination he is afebrile, his blood pressure is 120/89 mmHg and he is slightly tachycardic at 110bpm. His respiratory rate is 18bpm at rest with saturations of 98 percent in room air. When he mobilizes to the toilet, he becomes very tachypnoeic and his saturations drop to 90%. His blood tests are as follows: Hb 11.0 g/dl, Platelets $201 \times 10^9/l$, WBC $9.6 \times 10^9/l$, Neutrophils $4.5 \times 10^9/l$, Na⁺ 138 mmol/l, K⁺ 4.1 mmol/l, Urea 7.8 mmol/l, Creatinine 20 $\mu\text{mol/l}$, CRP 70 mg/l, Bilirubin 5 $\mu\text{mol/l}$, ALP 89 u/l, ALT 43 u/l, Albumin 34 g/l. An ABG is done which shows pH 7.35, pO₂ 7.7, pCO₂ 4.6, HCO₃⁻ 21, Lactate 2.2. His chest x-ray shows fine bilateral reticular nodular shadowing. What is the most appropriate treatment to start in this patient?
- A. Tazocin
 - B. Co-trimoxazole
 - C. Aciclovir
 - D. Co-trimoxazole and corticosteroids
 - E. Highly active anti-retroviral treatment

5. A 64-year-old woman is evaluated in the emergency department 4 hours after the abrupt onset of sharp, tearing chest and back pain. Medical history is significant for hyperlipidemia. Her only medication is atorvastatin. On physical examination, temperature is 36.8 °C, blood pressure is 173/99 mmHg and pulse rate is 90beats/min. Blood pressure measurements in both arms are equal. The remainder of the physical examination is unremarkable. CT angiography shows a descending thoracic aortic aneurysm with a maximal diameter of 6.8 cm and aortic dissection originating just distal to the left subclavian artery and extending to just below the diaphragm; there is no involvement of the renal arteries. Which of the following is the most appropriate initial management?
- A. Immediate endovascular stenting
 - B. Immediate open surgical repair
 - C. Medical therapy
 - D. Repeat CT angiography in 12 hours
 - E. Perform CBG
6. Juma is 23years old from Kigoma,he presents with the acute onset of fever, skin lesions on his extremities that are papular and erythematous with a hemorrhagic and necrotic center, joint pain and an acute tenosynovitis of the dorsum of his left foot. He has no past medical history and takes no medications. He does not smoke, drink alcohol or use illicit drugs. On physical examination, the patient has a temperature of 39.1°C. Passive flexion and extension of the left great toe causes severe pain over the dorsum of the midfoot and ankle. Which of the following is the most likely diagnosis?
- A. De Quervain tenosynovitis
 - B. Reiter syndrome
 - C. Acute gouty attack
 - D. Disseminated gonococcal infection
 - E. Still disease
7. Your aunt is 34 years old, she was recently told by another physician that her blood test was positive for *Helicobacter pylori*. She completed a course of medication but is concerned about this finding. This patient is at risk for which of the following?
- A. Squamous cell carcinoma of the esophagus
 - B. Adenocarcinoma of the esophagus
 - C. Non-Hodgkin lymphoma of the small intestine
 - D. Gastroesophageal reflux disease
 - E. Mucosa-associated tissue lymphomas (MALT)

8. A 47years old nurse presents to your office complaining of a poorly healing ulcer of her left second digit. The ulcer started a week ago and is painless. The patient has tried using over the counter antibacterial and hydrocortisone creams without improvement. She denies trauma to the hand. The patient has a temperature of 38.4°C and left-sided epitrochlear and axillary adenopathy. She has a 4cm ulcer on the dorsal side of the left second digit covered by a black eschar and surrounded by an extensive amount of non-pitting edema. Which of the following is the most likely diagnosis?
- A. Smallpox infection
 - B. Cutaneous anthrax
 - C. Cat-scratch disease
 - D. Leprosy infection
 - E. Brown recluse spider bite
9. Ms. Jane is a 67years old woman, presents to your clinic with complaints of painful hips and shoulders as well as headache. She relates that the muscle pain is felt on both arms and hips. She feels that her shoulders are stiff and the hips cannot move when she wakes up. It almost takes 40 minutes of painful physical activity for the stiffness to relent. Her appetite is decreased and she has lost 5 kg. "To make me even more miserable, the terrible headaches has just been started", she mentions. The headache is felt on the right side and is throbbing with no response to analgesics. On physical examination, she is noted to have painful restricted movements of shoulder and hip joints bilaterally. Her right temple is tender to touch. She is not febrile and the rest of the exam is inconclusive. Which one of the following would be the most appropriate next step in management?
- A. Check serum creatine kinase (CK) level.
 - B. Check rheumatoid factor.
 - C. Check ESR.
 - D. Perform a muscle biopsy.
 - E. Star the patient on prednisolone.

10. A 43-year-old gentleman who is admitted and found to have a STEMI has chest pain on the ward. He is currently recovering from his percutaneous coronary intervention the day before and has felt well until now. The pain is over the left side of the chest and severe if he breathes. He has no cough or fevers and his observations are within normal limits. On examination, he has normal heart sounds and a clear chest. He is mildly tender over the chest wall. His femoral puncture sites are clean with no haematoma. He is in sinus rhythm on the cardiac monitor and has soft non-oedematous calves. No JVP is seen. Lab results show; Na⁺ 156 mmol/l, K⁺ 3.4 mmol/l, Urea 5.6 mmol/l, Creatinine 78 µmol/l, CRP 45 mg/l, Hb 13.4 g/dl, Platelets 398 x 10⁹/l, WBC 13.0 x 10⁹/l. ECG shows a sinus rhythm, T wave inversion in V1-V3, PR 180bpm and flat in most leads. The chest x-ray has clear lung fields, heart is at the upper limit of normal for size. What is the likely diagnosis?

- A. Hospital acquired pneumonia
- B. Pericarditis
- C. Pulmonary embolism
- D. Coronary artery dissection
- E. Pleurisy

11. Mr. Kanani a 73-year-old gentleman presents to you with progressive shortness of breath. He can now walk 10 yards before stopping to catch his breath and he is unable to lie flat. He sleeps upright in his armchair and has stopped sleeping in his bed over the last three months. He has known hypertension and has had two previous myocardial infarctions. On examination, his apex beat is displaced to the 7th intercostal space in the left mid-axillary line and there are crepitations in the two lung bases. His JVP is raised at 5cm and there is bilateral leg edema. Laboratory investigations; Troponin <20 ng/ml, B-natriuretic peptide 14,000 ng/L (normal range 0-200), Chest X-ray cardiomegaly and increased alveolar shadowing in the perihilar areas ECG QRS 110ms, large volume complexes in chest leads. Which intervention is proven to reduce mortality in this case?

- A. Cardiac Resynchronisation Therapy (CRT)
- B. Digoxin
- C. Furosemide
- D. Ramipril
- E. Coronary artery bypass graft

12. You are an intern doctor at regional hospital and you review a 67years old man who has type 2 diabetes. His glycaemic control is reasonable with metformin therapy; the latest HbA1c is 54 mmol/mol (7.1%). A few weeks ago he was noted to have a clinic blood pressure reading of 152/90 mmHg. A 24 hour blood pressure monitor was requested. The report shows his average blood pressure was 142/88 mmHg. What is the most appropriate course of action?
- A. Do nothing for now, monitor his blood pressure regularly
 - B. Start an ACE inhibitor
 - C. Start a calcium channel blocker
 - D. Repeat the 24 hour blood pressure monitor in 4-8 weeks' time
 - E. Request an ultrasound of his kidneys
13. A 56-year-old male patient with no history of ischaemic heart disease had a non-ST elevation myocardial infarction 20 days ago and was started on aspirin, atorvastatin, bisoprolol and enalapril as an inpatient. He has been discharged to your care in the cardiology outpatients department. He presents for review 1 month later saying he remains breathless on minimal exertion (walking 50 metres) with no chest pains. There is no evidence of pulmonary oedema on examination. A recent echocardiogram shows a left ventricular ejection fraction of 40%. His beta natriuretic peptide level is 436 pg/mL (normal <100 pg/mL). What would be most appropriate to add to his oral therapy?
- A. Furosemide
 - B. Spironolactone
 - C. Hydralazine and isosorbide dinitrate
 - D. Irbesartan
 - E. Ivabradine
14. A 38years old man presents to your gastroenterology clinic. He is a businessman, working for an iron and steel trading company and makes regular trips to Morocco to visit mining executives. He has been newly diagnosed with HIV and he is not on any medication. For the previous four months, he has been troubled by diarrhoea, up to 8 motions a day, with abdominal bloating and cramping. There is no blood visible in the stool. He has previously been treated for tuberculosis as a child. A stool sample is sent to the lab, and Modified Ziehl-Neelson stain reveals multiple red staining round objects measuring 5 microns in diameter. What will be the most appropriate treatment?
- A. Anti-retroviral therapy
 - B. Co-trimoxazole
 - C. Rifampicin, isoniazid, ethambutol, pyrazinamide
 - D. Metronidazole
 - E. Ciprofloxacin

15. A 23-year-old intravenous drug user presents to you with bilateral groin abscesses. After drainage of the abscesses, he is started on intravenous flucloxacillin and gentamicin. Twelve hours later he complained of diplopia which deteriorated, and also developed dysphagia and muscle weakness and needed ventilatory support. His past medical history is significant of myasthenia gravis. What is the diagnosis?
- A. Aminoglycoside-induced neuromuscular blockade
 - B. Guillain-Barre syndrome
 - C. Metastatic brain abscess
 - D. Tetanus
 - E. Wound botulism
16. Mr. Mkude is a 65 years old man, referred to your Respiratory clinic by his General Practitioner. The patient gives a three month history of a productive cough and steady weight loss of 10 kg. His sputum had initially been yellow, but over the past week he has noticed streaks of blood. He also complains of sweats at night and sometimes has had to change his bedclothes. He has a longstanding history of bronchial asthma that has required admission to hospital on several occasions. On two occasions, he has been admitted in respiratory distress and has required intubation and ventilation. His current therapy includes salbutamol and beclomethasone inhalers and prednisolone 5mg once daily which he has taken for several years. He also has a home nebulizer which he uses as required. His chest x-ray in clinic shows right apical consolidation. The last chest radiograph, taken six months previously on admission to hospital, had been normal. A sputum sample proves to be positive for acid alcohol fast bacilli. A presumptive diagnosis of pulmonary tuberculosis is made and he is started on anti-tuberculous therapy. Five days later, he presents to Casualty with breathlessness and wheeze. On examination he is afebrile. Widespread expiratory wheezes are heard throughout his chest. His Peak Expiratory Flow Rate (PEFR) is measured at 110 L/min. His chest x-ray does not show any significant change from the last film taken in Chest Clinic. Which of the following options would be the most appropriate step in his management?
- A. Continue anti-tuberculous therapy and steroids at current dose
 - B. Continue anti-tuberculous therapy and reduce steroid dose
 - C. Continue anti-tuberculous therapy and increase steroid dose
 - D. Stop anti-tuberculous therapy and continue steroids at current dose
 - E. Stop anti-tuberculous therapy and steroids and start broad-spectrum antibiotics

17. A 35-year-old woman presents at the OPD complaining of chronic crampy abdominal pain and intermittent constipation and diarrhea, but no weight loss or gastrointestinal bleeding. Her abdominal pain is usually relieved with defecation. Colonoscopy and upper endoscopy with biopsies are normal, and stool cultures are negative. Which of the following is the most likely diagnosis?
- A. Infectious colitis
 - B. Irritable bowel syndrome
 - C. Crohn's disease
 - D. Ulcerative colitis
 - E. Typhoid
18. A 60 years old man was diagnosed last year with adenocarcinoma of the lung, and a 4cm mass lesion was treated with a right lower lobectomy. He now has an abdominal CT scan that reveals scattered hepatic mass lesions and hilar lymphadenopathy. For several weeks, he has had increasing malaise. A urinalysis reveals marked proteinuria, and a 24 hour urine protein collection is 2.7 g/24hr. His serum urea is 30 mmol/L (2.5-7.5) with creatinine of 450 μ mol/L (60-110). A renal biopsy is performed, and there is focal deposition of IgG and C3 with a granular pattern. He is most likely to have which of the following conditions?
- A. Goodpasture's syndrome
 - B. Membranous glomerulonephritis
 - C. Minimal change glomerulonephritis
 - D. Nodular glomerulosclerosis
 - E. Rapidly progressive glomerulonephritis
19. You have been called to attend a 25years lady with known systemic lupus erythematosus presenting with the nephrotic syndrome. You perform a renal biopsy and this confirms diffuse proliferative glomeronephritis (WHO Class IV). Which of the following treatment regimens would you advise?
- A. Azathioprine alone
 - B. Prednisolone alone
 - C. Azathioprine and prednisolone
 - D. Prednisolone and intravenous cyclophosphamide
 - E. Prednisolone and methotrexate

20. A 48-year-old man is referred to your clinic by his primary care provider after recent laboratory studies showed glomerular filtration rate, calculated using the MDRD Study equation of 55 mL/min/1.73 m². Medical history includes diagnosis of type 2 diabetes mellitus 10 years ago and diagnosis of hypertension five years ago. Current medications include carvedilol 12.5mg twice daily, lisinopril 20mg daily, and glipizide 5mg daily. Recent laboratory studies of serum show hemoglobin A1c of 8.0% and potassium level of 4.5 mEq/L. BMI is 24.2 kg/m². Pulse rate is 64bpm and blood pressure is 124/64 mmHg. Physical examination shows no abnormalities. To prevent further decrease in this patient's glomerular filtration rate, which of the following changes to his drug regimen is most appropriate?
- A. Increase the dosage of carvedilol to 25 mg twice daily
 - B. Increase the dosage of glipizide to 10 mg twice daily
 - C. Increase the dosage of lisinopril to 40 mg daily
 - D. Replace glipizide with metformin 500 mg twice daily
 - E. Replace lisinopril with losartan 50 mg daily
21. Ms. Grace is a 65-year-old woman with stage 4 chronic kidney disease secondary to hypertension comes to OPD because she has had dysuria and increased urinary frequency during the past two days. She has not had fever or hematuria. Temperature is 37.3°C, PR is 90bpm and BP is 142/85 mmHg. On physical examination, no flank tenderness is noted. Urinalysis shows cloudy urine that is positive for leukocyte esterase, nitrites and protein. Results of urine culture are pending. Which of the following medications is the most appropriate therapy for this patient's condition?
- A. Intramuscular administration of ceftriaxone
 - B. Intravenous administration of gentamicin
 - C. Intravenous administration of vancomycin
 - D. Oral administration of ciprofloxacin
 - E. Oral administration of nitrofurantoin

22. You are called by a nurse to review a 66years old man presenting with increasing lethargy and confusion. Past medical history includes depression, Barrett's oesophagus, and benign prostatic hyperplasia. Current medications are sertraline 100mg, lansoprazole 30mg BD, and tamsulosin 400mg. Blood tests are as follows: Hb 10.4 g/dl, Na⁺ 118 mmol/l, Platelets 168 x 10⁹/l, K⁺ 4.1 mmol/l, WBC 8.7 x 10⁹/l, Urea 7.9mmol/l, Neuts 2.5 x 10⁹/l Creatinine 173 µmol/l, Lymphs 3.0 x 10⁹/l, Eosin 0.6 x 10⁹/l, Corrected calcium 3.01mmol/l and Total protein 95g/l Albumin 30g/l. Urinary sodium 7mmol/l, Urinary osmolality 100mOsm/kg and Plasma osmolality of 280mOsm/kg. What is the most likely cause of this patient's hyponatraemia?

- A. Syndrome of inappropriate ADH secretion due to underlying malignancy
- B. Multiple myeloma
- C. Psychogenic polydipsia
- D. Adrenal insufficiency
- E. Drug-induced syndrome of inappropriate ADH secretion

23. A 39 years old female presents to you in the ward after admission with end-stage renal failure secondary to IgA nephropathy. She was discharged 3 days earlier following an admission due to collapse in the context of hyperkalaemia (Potassium 7.8 mmol/l). She has been transferred to the medical assessment unit having developed rigors on dialysis earlier today. Bloods taken at the end of dialysis reveal: White cell count 15.2 x 10⁹/l, Sodium 134 mmol/l, Potassium 2.1 mmol/l, Urea 10.6 mmol/l, Creatinine 400 µmol/l and C-reactive protein 119 mg/dL. What is the immediate priority in her management?

- A. Replace potassium (K⁺)
- B. Replace magnesium (Mg²⁺)
- C. Intravenous antibiotics
- D. Intravenous calcium gluconate
- E. Insulin/dextrose infusion

24. Mr. Marunde is a 72-year-old man, he is brought to you from a nursing home. He is normally bedbound and suffers from diabetes, peripheral vascular disease and ischemic heart disease. He has become increasingly drowsy over the past two days. He has not been on travel though has been ill with a cough the previous days and complained of a runny nose. He responds to voice but is difficult to rouse. There is no neck stiffness and the tone is normal in all 4 limbs. Power is difficult to assess but there appears to be no focal weakness. He has responsive pupils and no ophthalmoplegia. He has a systolic murmur heard and his chest has crepitations in the left base. His observations show heart rate 96bpm, blood pressure 110/65 mmHg, temperature 38.4°C, saturations 96% in air and respiratory rate 14bpm. During examination, he develops a brief seizure lasting 30 seconds which settles without any interventions. Labs show; Na⁺ 139 mmol/l, K⁺ 5.3 mmol/l, Urea 8.9 mmol/l, Creatinine 120 µmol/l, CRP 90 mg/l, Hb 13.4 g/dl, Platelets 398 x 10⁹/l and WBC 13.2 x 10⁹/l. Chest x-ray raised left hemidiaphragm seen in previous scans, CT head no acute infarction or haemorrhage seen. Which management option should be prioritized as the most urgent?

- A. Lumbar puncture
- B. Acyclovir
- C. Dexamethasone
- D. Amoxicillin + clarithromycin
- E. Paracetamol

25. Mr. Hamis is a middle-aged man, presents to the emergency department while you are on call with mild epigastric pain and a single episode of coffee-ground vomit. He had no past medical history and was not on any medication. On examination his heart rate was 70 beats per minute and regular. His blood pressure was 132/80 mmHg, respiratory rate 12bpm and oxygen saturation 99% on air. Physical examination was normal. Investigations were as follows: haemoglobin 14.5 g/dL, platelet count 120 × 10⁹/L. What further information is required to calculate his Blatchford score?

- A. Age
- B. Creatinine
- C. Platelets
- D. Prothrombin time
- E. Urea

26. You are the first on call today and you are called by the nurse to review a 75years old woman who presents to casualty with two episodes of coffee-ground vomiting and epigastric pain. She had a past medical history of ischemic heart disease and had previously had two myocardial infarctions. She had symptomatic angina about once a month. She was taking regular aspirin 75mg, ramipril 5mg, bisoprolol 5mg, simvastatin 40mg and nicorandil 20mg bd. On examination she had mild epigastric tenderness on palpation. Her heart rate was 68 beats per minute, blood pressure 120/82 mmHg, respiratory rate 20bpm, and oxygen saturation 96% on air. Upper gastrointestinal endoscopy was performed, which showed a duodenal ulcer. Haemostasis was achieved at endoscopy. She was started on a proton pump inhibitor. What is the best management of her anti-platelet therapy?
- A. Continue aspirin
 - B. Discontinue aspirin
 - C. Discontinue aspirin for one week then restart
 - D. Discontinue aspirin until repeat endoscopy in six weeks
 - E. Switch to clopidogrel
27. A 28years old woman has noticed a change in her appearance; most notably her clothes do not fit her properly and are especially tight around the waist. Her face appears flushed and more rounded than usual, despite exercising regularly and eating healthily her weight has steadily increased over the last 3 weeks. On visiting your clinic, you notice her blood pressure has increased since her last visit and she has bruises on her arm. She is especially worried about a brain tumor. The most appropriate investigation would be;
- A. Low-dose dexamethasone test
 - B. High-dose dexamethasone test
 - C. Urinary catecholamines
 - D. Computed tomography (CT) scan
 - E. Urinary free cortisol measurement

28. A 34years old patient presents to you at the endocrinology clinic. He has had difficulties with erections and sexual desire, as well as low energy. He was referred by the GP after a morning serum testosterone was low. His problems started six months ago, following increasing symptoms of acid reflux. He also has DM-1. His current medications include Levemir, Novorapid, omeprazole and metoclopramide. Capillary monitoring of sugar levels has been within normal range, but prolactin has found to be elevated. What is the most appropriate action?
- A. Start testosterone replacement
 - B. Stop metoclopramide
 - C. Prescribe testosterone replacement
 - D. MRI of pituitary
 - E. Stop omeprazole
29. A 23-year-old woman presents to your clinic complaining of months of weight gain, fatigue, amenorrhea, and worsening acne. She cannot precisely identify when her symptoms began, but she reports that without a change in her diet she has noted a 12.3-kg weight gain over the past 6 months. She has been amenorrheic for several months. On examination she is noted to have truncal obesity with bilateral purplish striae across both flanks. Cushing's syndrome is suspected. Which of the following tests should be used to make the diagnosis?
- A. 24-hour urine free cortisol
 - B. Basal adrenocorticotrophic hormone (ACTH)
 - C. Corticotropin-releasing hormone (CRH) level at 8 a.m.
 - D. Inferior petrosal venous sampling
 - E. Overnight 1-mg dexamethasone suppression test
30. A 63years old woman walks into your consultation room with a 5year history of psoriasis involving her elbows that has been controlled with topical glucocorticoids and a vitamin D analogue. However, in the past 9–12 months she has developed worsening and new lesions involving her knees, gluteal regions, and scalp. She is increasingly uncomfortable and has noted swelling of her digits with pain and stiffness. She is up to date on all cancer screening and has no sign of systemic infection. Her physical examination is only notable for the psoriatic plaques that are red and scaling, and swollen, tender DIPs on both hands. All of the following therapies are indicated for worsening widespread systemic psoriatic disease **EXCEPT**:
- A. Alefacept
 - B. Cyclosporine
 - C. Infliximab
 - D. Methotrexate
 - E. Prednisone

31. A 33-year-old woman, who is otherwise well, presents to the emergency department with symptoms of recurrent episodes of hemoptysis. She has no fever, weight loss, cough, or sputum production. She is not experiencing any dyspnea or chest discomfort and is not taking any medications. She works in an office setting, reports no travel history, and her family history is negative for lung disorders or bleeding diathesis. Her vital signs, oxygen saturation, and physical examination are entirely normal. The CXR, biochemistry, CBC, and coagulation profile are also normal. Which of the following is the most appropriate initial diagnostic test?

- A. Echocardiogram
- B. gallium scan
- C. CT scan of chest
- D. bronchoscopy
- E. pulmonary function tests

32. Ms. Ashura, a 55-year-old woman with a past medical history of hypertension presents to the emergency department because her tongue and lips feel swollen. During the history, she tells you she recently started a new blood pressure medication. Her only other medication is a baby aspirin. Her vitals at triage are BP 130/70 mmHg, HR 85 beats/minute, RR 16 breaths/minute, temperature 36.7°C, and oxygen saturation 99% on room air. On physical examination, you detect mild lip and tongue swelling. Over the next hour, you notice that not only are her tongue and lips getting more swollen, but that her face is also starting to swell. Which is the most likely causative agent?

- A. Metoprolol
- B. Furosemide
- C. Aspirin
- D. Lisinopril
- E. Diltiazem

33. Makala, who is a 41-year-old restrained driver, has been involved in a high-speed motor vehicle collision and is brought to the emergency department. The patient is breathing without difficulty and has bilateral and equal breath sounds. He has strong peripheral pulses. His HR is 121 beats/minute. His Glasgow Coma Scale (GCS) is 14. The secondary survey reveals bruising of the chest wall. You are concerned about a possible cardiac injury. Which area of the heart is most commonly involved in cardiac contusion?

- A. Right atrium
- B. Right ventricle
- C. Left atrium
- D. Left ventricle
- E. Septum

34. A 20-year-old boy arrives at the casualty with multiple stab wounds to his chest. His BP is 85/50 mmHg and HR is 123 beats/minute. Two large bore intravenous lines are established and IV fluids are running wide open. On examination, the patient is mumbling incomprehensibly, has good air entry on lung examination and has jugular venous distension. As you are listening to his heart, the nurse calls out that the patient has lost his pulse and that she cannot get a BP reading. Which of the following is the most appropriate next step in management?
- A. Atropine IV push
 - B. Epinephrine IV push
 - C. Placement of bilateral chest tubes
 - D. Emergency thoracotomy
 - E. Perform pericardiocentesis
35. A 19-year-old boy is brought into resuscitation room by his father after a head-on cycling accident. The patient was not wearing a helmet. Upon presentation, his BP is 125/75 mmHg, HR is 105 beats/minute, RR is 19 breaths/minute, and oxygen saturation is 100 percent on 10L of oxygen via face mask. His eyes are closed but he opens them to verbal command. He also moves his arms and legs on command. When you ask him questions, he is disoriented but able to converse. What is the patient's GCS score?
- A. 11
 - B. 12
 - C. 13
 - D. 14
 - E. 15
36. You are on duty in the emergency department when you are notified that an explosion and mass casualty event has occurred. The first patient, an approximately 30-year-old man, arrives poorly responsive and confused. He is sweating profusely and vomiting, with an episode of diarrhea. Vital signs include a blood pressure of 170/90 mm Hg, respiratory rate of 22 breaths/minute, heart rate of 55 beats/minute, temperature 37.0°C, and pulse oximetry 93% on room air. He requires frequent suctioning of his airway. His pupils are pinpoint and he has prominent rales on lung exam. After you clear and control the patient's airway, what is the most appropriate initial pharmacologic therapy?
- A. Atropine
 - B. Flumazenil
 - C. Methylene blue
 - D. Naloxone
 - E. Sodium bicarbonate

37. Ms. Maria, a 60years old woman with a history of diabetes is brought to the emergency department by Samaritans who state that the patient was found on a bus in a lethargic and diaphoretic condition. Her point of care glucose level at the EMD was 1.9 mmol/L. at EMD, you quickly administered dextrose through an IV line. The patient became alert and responsive, stating that she just took her normal medication. Her blood sugar went up to 6.1mmol/L and she remained this way throughout the time at EMD. However, in the ward after being admitted you notice that the patient is again diaphoretic and is mumbling her speech. Her glucose level is now 2.6 mmol/L. You administer dextrose and she improves. Which of the following diabetes medications commonly causes hypoglycemia for which the patient is likely to require hospital admission?
- A. Regular insulin
 - B. Metformin
 - C. Glyburide
 - D. Sitagliptin
 - E. Acarbose
38. You receive a 34years old man with a history of severe asthma at the emergency department with sudden onset difficulty in breathing. Vital signs include RR 36 breaths/minute, temperature 37°C and oxygen saturation of 85 percent on room air. Despite aggressive treatment, he requires emergency endotracheal intubation. He is given etomidate and succinylcholine for rapid sequence induction. Shortly after intubation, he develops muscle rigidity and a temperature of 40.0°C. Which of the following is the most appropriate next step in treatment?
- A. Administer bromocriptine
 - B. Administer dantrolene
 - C. Administer IV antibiotics and order a chest X-ray
 - D. Administer IV fluids
 - E. Administer physostigmine
39. A 7years old girl with known sickle cell disease and a previous history of admissions for acute painful crises presents to you with a 1day history of fever and cough. She is tachypnoic on presentation with a temperature of 38.8°C. Auscultation of the chest reveals rales on the right. A chest radiograph confirms the diagnosis of pneumonia. After initial treatment with antibiotics and IV fluids, patients with this condition are most at risk of developing which complication?
- A. Acute chest syndrome
 - B. Sepsis
 - C. Empyema
 - D. Stroke
 - E. Congestive heart failure

40. A 9-year-old boy with a known history of sickle cell anemia is brought to the emergency department after sudden onset of left-sided hemiplegia. The mother states that her son had rhinorrhea and nasal congestion for the past 2 days, but has otherwise been in a good state of health. What is the best diagnostic modality to evaluate for possible cerebrovascular accident?
- A. Cerebral angiography
 - B. LP
 - C. Magnetic resonance imaging and angiogram (MRI/MRA) of the head and neck
 - D. Non-contrast computerized tomography (CT) scan of the head
 - E. Positron emission tomography (PET) scan
41. You receive a 74-year-old woman with a history of diabetes brought to the emergency department with altered mental status. Her home health aide states that the patient ran out of her medications 4 days ago. Her BP is 130/85 mm Hg, HR is 110 beats/minute, RR is 18 breaths/minute, and temperature is 37.6°C. On examination, she cannot follow commands but responds to stimuli. Laboratory results reveal white blood cell count of 14,000/L, hematocrit 49%, platelets 325/L, sodium 128 mEq/L, potassium 3.0 mEq/L, chloride 95 mEq/L, bicarbonate 22 mEq/L, blood urea nitrogen 40 mg/dL, creatinine 1.8 mg/dL, and glucose 55.6 mmol/L. Urinalysis shows 3+ glucose, 1+ protein, and no blood or ketones. After addressing the ABCs, which of the following is the most appropriate next step in management?
- A. Administer a 2 to 3 L bolus of NS, followed by IV insulin
 - B. Administer a 2 to 3 L bolus of NS, followed by IV insulin and IV phenytoin
 - C. Administer 10 units of IV insulin, followed by 2 L of NS
 - D. Order a computed tomographic (CT) scan of the brain
 - E. Arrange for emergent hemodialysis
42. A 30-year-old woman is brought to the emergency department by her neighbors after swallowing 34 tablets of paracetamol. On arrival; HR is 120bpm, BP 110/80mmHg and RR 20bpm. The most important initial management step is?
- A. administration of activated charcoal
 - B. administration of N Acetyl cysteine
 - C. transfer to the liver transplant unit
 - D. referral to psychiatry for review
 - E. Checking for paracetamol level

43. You are on the day team call at emergency department and a 23 years old lady presents with history of lower abdominal pain, abnormal vaginal discharge, dyspareunia, fever nausea and vomiting for 5days. The most likely diagnosis is?
- A. Acute appendicitis
 - B. Ruptured ovarian cyst
 - C. Ovarian torsion
 - D. Pelvic inflammatory disease
 - E. Acute pyelonephritis
44. A 20years old man presents to the emergency department after being stung by a bee. His skin is red and covered with welts. He has obvious swelling of his lips and tongue, but no wheezes. After treatment with appropriate medications, he complains of throat swelling and his voice is hoarse. He has stridorous inspirations but a normal respiratory rate and oxygen saturation. What is the most appropriate management of this patient airway?
- A. Continued observation as long as oxygen saturation remains normal
 - B. Call anesthesia and prepare for RSI.
 - C. Begin high-dose nebulized albuterol and continue to observe.
 - D. Prepare for cricothyroidotomy.
 - E. Sedation
45. Your brother is 48years of age, he comes at the emergency department presenting with chest pain. In the initial evaluation of this patient, which of the following is the most important diagnostic test?
- A. Chest x-ray
 - B. ECG
 - C. Serum cardiac markers
 - D. Computed tomography
 - E. Cholesterol levels
46. A 17years old adolescent boy who is a type I diabetic is brought in by his parents with concern about diabetic ketoacidosis. He has had several prior episodes of DKA. Which of the following is diagnostic of DKA?
- A. Polyuria, polydipsia, fatigue
 - B. Hypotension, dehydration, fruity breath odor
 - C. Hyperglycemia, ketosis, metabolic acidosis
 - D. Serum blood sugar of 600 mg/dL in the face of high concentrations of insulin
 - E. Elevated HCO₃ and elevated glucose

47. You are attending a 32-year-old woman at ED who is noted to have persistent hypotension from suspected toxic shock syndrome despite 6 L of normal saline given intravenously. Which of the following is the best next step?
- Use colloid (albumin) for the next bolus.
 - Initiate norepinephrine infusion.
 - Administer corticosteroid therapy.
 - Transfuse with fresh-frozen plasma.
 - Activated protein C.
48. A 20-year-old man involved in a motor vehicle accident is brought into the resuscitation room having lost much blood at the accident scene. His initial blood pressure is 80/40 mmHg and heart rate 130 beats per minute. He is given 3 L of normal saline intravenously and is still hypotensive. Which of these statements most accurately describes the pathophysiology of his condition?
- Insufficient cardiac preload
 - Insufficient myocardial contractility
 - Excessive systemic vascular resistance
 - Excessive IL-6 and leukotrienes
 - Volume overload
49. A 73-year-old man had a cardiac arrest while being attended at ED. The rhythm was pulseless electrical activity. Cardiopulmonary resuscitation was started at a rate of 30 chest compressions to 2 ventilations. What is the correct rate of chest compressions?
- 80–100 per minute
 - 90–110 per minute
 - 100–120 per minute
 - 110–130 per minute
 - 120–140 per minute
50. A 35-year-old woman presents to the ED complaining of feeling lightheadedness. She noticed some vaginal bleeding earlier in the day. Her blood pressure is 85/53 mm Hg, heart rate is 130 beats per minute and respiratory rate is 18 breaths per minute. Which of the following is the most appropriate next step in management?
- Obtain a urine pregnancy test.
 - Obtain a serum quantitative beta human chorionic gonadotropin (β -hCG).
 - Obtain immediate IV access and begin fluid resuscitation.
 - Obtain stat OB/GYN consult.
 - trans-vaginal ultrasound

51. A 76-year-old woman was admitted to the ward with a one-week history of diarrhoea. She was opening her bowels four times per day. She had recently started a new medication. On examination, her temperature was 36.4°C, pulse was 74 beats per minute, and blood pressure was 134/78 mmHg. She had a resting tremor in the right upper limb. Her abdomen was soft, with mild generalized tenderness. Which of the following drugs is most likely to have caused her diarrhoea?
- A. Bisoprolol
 - B. Co-careldopa
 - C. Omeprazole
 - D. Paracetamol
 - E. Simvastatin
52. A patient at 17 weeks gestation is diagnosed as having an intrauterine fetal demise. She returns to your office 5 weeks later and has not had a miscarriage, although she has had some occasional spotting. This patient is at increased risk for which of the following?
- A. Septic abortion
 - B. Recurrent abortion
 - C. Consumptive coagulopathy with hypofibrinogenemia
 - D. Future infertility
 - E. Ectopic pregnancies
53. You are an intern on call in gynecological ward and you attend a 26-year-old married woman whose LMP was 2 ½ months ago developed bleeding, uterine cramps, and passed some tissue per vagina. Two hours later she began to bleed heavily. What is the most likely diagnosis is?
- A. Twin pregnancy
 - B. Threatened abortion
 - C. Inevitable abortion
 - D. Premature labor
 - E. Incomplete abortion

54. A 17-year-old G1P0 woman presents to labor and delivery complaining of contractions at 38 weeks' gestation. Her BP at the beginning of pregnancy was 90/60 mm Hg. She has gained 21 kg throughout pregnancy (4.5 kg in the past 4 weeks). Her BP on presentation was 145/80 mm Hg. A urine dip stick is +1 protein. On examination, her cervix is 3 cm dilated, 90% effaced, 1 station. What is the next step in her management?
- A. MgSO₄
 - B. Betamethasone
 - C. Send laboratory tests
 - D. Artificial rupture of the membranes
 - E. Send home until in active labor
55. Mwanahawa is a 26-year-old woman, G1P0 presents for a prenatal visit at 34 weeks GA. She complains of some mild nausea and vomiting over the past 3 days. She has no headache and no visual changes. Her BP is 142/83 mmHg. On examination, she has +1 lower extremity pitting edema, and +3 reflexes bilaterally with four beats of clonus. A urinalysis dip has +1 protein. The laboratory test results come back with elevated LFTs, low platelets, a normal hematocrit, and an elevated LDH. What is her diagnosis?
- A. Preeclampsia
 - B. Eclampsia
 - C. Chronic hypertension
 - D. HELLP syndrome
 - E. Gestational Hypertension
56. A 25-year-old patient at 32 weeks of amenorrhea was brought to maternity ward. These are the clinical findings on the physical examination. Pale, dehydrated, PR: 120 bpm; BP 90/60 mmHg; delay in the capillary refilling time; bleeding by mouth. Abdominal exam: Fundal height 36 cm, tenderness, and hard uterus, no Fetal heart heard. Vaginally: scanty blood coming through the canal, reddish area around the external cervical Os was noticed. Which among the following is the most likely diagnosis?
- A. Placental abruption.
 - B. Placenta praevia type IV.
 - C. Cervical carcinoma.
 - D. Severe placental abruption with IUFD and CID.
 - E. Vasa praevia with IUFD.

57. A 28-year-old G2P1L1 woman who is 18 weeks pregnant presents to the ED with increasing left lower extremity swelling, redness, and pain. She first noticed these symptoms 2 days ago and has tried elevation and warm compresses, which have not helped. She has no personal or family history of blood clots. She is otherwise healthy, and her only medication is a prenatal vitamin. In the ED, her vital signs are normal. Physical examination is significant for left lower extremity edema, calf tenderness, and erythema. You suspect that she has a lower extremity DVT, and you plan to start her on anticoagulation therapy. Which of the following is the most important test to confirm your diagnosis?

- A. Venography
- B. D-dimer
- C. Left lower extremity venous Doppler ultrasound
- D. MRI of the left lower extremity
- E. No further testing is indicated

58. A 28-year-old G2P1 woman presents to the emergency department with abdominal pain since the past day. She reports a 1-week history of nausea with occasional vomiting. She has noticed some breast tenderness as well. She denies dysuria, vaginal bleeding, or any bowel symptoms. She reports that her last period was 4 weeks ago, but was lighter than normal. She has been using condoms for contraception. On arrival, her vital signs include a temperature of 37°C, BP of 117/68 mmHg, pulse rate of 78 beats per minute, and respiratory rate of 16 breaths per minute. Cardiovascular and respiratory examinations are normal. She notes some suprapubic abdominal discomfort with palpation, but she does not have rebound tenderness or guarding. A speculum examination reveals a closed cervix without bleeding. A pelvic examination is mildly uncomfortable and reveals a normally sized, anteverted uterus, and palpably normal adnexa. A urine pregnancy test is positive. What is the test you should order first?

- A. Type and cross
- B. CBC
- C. Quantitative level of β -hCG
- D. Pelvic ultrasound
- E. Urine gonorrhea and chlamydia testing

59. A 31-year-old G1P0 woman at 39 weeks and 4 days presents to labor and delivery unit, with regular contractions occurring every 3 to 5 minutes. Her contractions last 30 to 90 seconds. She is not sure if she has been leaking any fluid from her vagina. You take her history and conduct a physical examination. Rupture of membrane would be supported by which of the following?
- A. Nitrazine paper remaining orange when exposed to fluid in the vagina
 - B. A negative fern test
 - C. An ultrasound with a normal AFI
 - D. A negative tampon test
 - E. Speculum examination with evidence of pooling in the vagina
60. A 33-year-old woman at 37 weeks gestation confirmed by early sonogram presents with moderate to severe vaginal bleeding, and is noted by sonogram to have placenta previa, which of the following is the best management for her?
- A. Induction of labor
 - B. Give tocolytic drugs
 - C. Caesarean section
 - D. Expectant management
 - E. Artificial rupture of the membrane
61. A 19-year-old woman comes to the emergency room and reports that she fainted at work earlier in the day. She has mild vaginal bleeding. Her abdomen is diffusely tender and distended. In addition, she complains of shoulder and abdominal pain. Her temperature is 36.5°C, pulse rate is 120bpm and blood pressure is 96/50 mmHg. To confirm the diagnosis suggested by the available clinical data, the best diagnostic procedure is?
- A. Pregnancy test
 - B. Posterior colpotomy
 - C. Dilation and curettage
 - D. Culdocentesis
 - E. Laparoscopy

62. A 24 years old woman (gravida 2, para 0, abortus 1) is seen in the emergency department because of vaginal bleeding and abdominal cramps. Her LMP was 10 weeks ago. History is unrevealing except for an induced abortion 2 years ago without complications. She presently denies instrumentation for abortion. Physical examination reveals a BP of 110/70 mmHg, pulse 120bpm, and temperature 38.3°C. The abdomen is tender with slight rebound in the lower quadrants. The pelvic examination reveals blood in the vault and a foul-smelling discharge from the cervix, which is dilated to 2 cm. The uterus is 8 to 10 weeks size and tender, and no adnexal masses are palpated. What is the most likely diagnosis?

- A. choriocarcinoma
- B. hydatidiform mole
- C. pelvic inflammatory disease (PID)
- D. septic abortion
- E. twisted ovarian cyst

63. A 35 years old woman had a spontaneous vaginal delivery 10 days ago. She delivered a healthy baby girl and is currently breastfeeding. There were no complications throughout labour and the midwife has documented that the placenta appears complete. She now presents with irregular dark red vaginal bleeding over the past 2 days. Her blood pressure is 130/75 mmHg, pulse rate is 85 beats/minute and respiratory rate is 18 breaths/minute. She has a temperature of 37.4 °C. What is the next most appropriate action?

- A. Crossmatch 2 units of packed red cells
- B. Cervical smear
- C. Pelvic ultrasound
- D. High vaginal swab
- E. Reassure, no action required

64. A 35-year-old G2P1L1 woman at 40 weeks 6 days presents to labor and delivery triage with a 5-hour history of painful contractions. Monitoring reveals contractions every 3 minutes and cervical examination on arrival is 3 cm dilated, 50% effaced, and 22 station. Her pregnancy has been complicated by gestational diabetes and 20kg weight gain in pregnancy (BMI 24). In her first pregnancy, she presented at 2 cm dilation and 90% effacement. Her labor progressed slowly with dilation of 1 cm every 3 hours until labor arrested at 7 cm. A healthy baby girl weighing 4,200g was delivered by cesarean section after arrest at 7 cm for 4 hours. Today your patient requests a trial of labor after cesarean section. You recheck her cervix 2 hours later and find that it is 4 cm dilated, 90% effaced, and 21 station. The estimated fetal weight by Leopold's is 4000g. A recent ultrasound performed at 38 weeks estimated the fetal weight at 3,900g. You admit the patient to labor and delivery for expectant management. Which of the following factors was least likely to result in her prior failure to progress?

- A. Obstetric conjugate diameter of the pelvis greater than 11.5 cm
- B. Inadequate strength of uterine contractions
- C. Fetal size or position
- D. Maternal pelvis shape
- E. Fetal lie

65. Ms. Maria is 33-year-old G8P5L6 woman with fundal height of 39 cm presents for initial prenatal visit in your clinic. She is currently an inmate at a local jail. She is imprisoned on charges of marijuana possession. She has had no prenatal care. She is unsure of her last period but reports that she started feeling the baby move approximately 5 months ago. She denies vaginal bleeding, leaking fluid, or contractions during the pregnancy. She reports using marijuana nearly daily throughout the pregnancy. She has not been taking any medications in pregnancy and has had no other exposures. The father of the baby is not involved. She does not have custody of her other children and has an open DHS case. She hopes to regain custody and is interested in drug rehabilitation. Ultrasound performed in your clinic shows gestational age to be approximately 40 weeks 3 days. What is the most common cause of a diagnosis of post-term pregnancy?

- A. Inaccurate dating
- B. Fetal anomaly
- C. Delayed presentation to prenatal care
- D. Advanced maternal age
- E. Multi-parity

66. A 33 year old woman presents to you with a positive pregnancy test and concerns about this pregnancy. She has had 3 early miscarriages in the past with no live births. Based on her last menstrual period, she is now 6 weeks gestation. She was investigated for antiphospholipid syndrome in the past and her lupus anticoagulant antibodies were found to be positive. Her BMI is 22 kg/m² and she is a non-smoker. What is the most appropriate management?
- A. Cervical cerclage
 - B. Bed rest until delivery
 - C. Prophylactic vaginal progesterone
 - D. Low molecular weight heparin and aspirin
 - E. Reassure, no change of management
67. You confirm an intrauterine pregnancy of approximately 10 weeks gestation in a 30-year-old gravida 5, para 4 woman with an IUD in place. The patient expresses a strong desire for the pregnancy to be continued. On examination, the string of the IUD is noted to be protruding from the cervical os. The most appropriate course of action is?
- A. Leave the IUD in place without any other treatment
 - B. Leave the IUD in place and continue prophylactic antibiotics throughout pregnancy
 - C. Remove the IUD immediately
 - D. Terminate the pregnancy because of the high risk of infection
 - E. Perform a laparoscopy to rule out a heterotopic ectopic pregnancy
68. A 38 year old woman is seen in your clinic for the evaluation of a swelling in her right vulva. She has also noted pain in this area when walking and during coitus. On examination a mildly tender fluctuant mass was noticed just outside the introitus in the right vulva. What is the most likely diagnosis?
- A. Bartholin's abscess.
 - B. Lymphogranuloma venereum.
 - C. Chancroid.
 - D. Vulva carcinoma.
 - E. Herpes infection.

69. On bimanual examination, you palpated bilateral adnexal masses from the abdomen examination of Mwanahamisi. A vaginal US was done for her and it showed bilateral tubo-ovarian abscesses. What is the most appropriate next step in her management?
- A. Admit the patient for emergency laparoscopic drainage of the abscess.
 - B. Admit the patient and give her IV antibiotic.
 - C. Treat with multiple oral antibiotics as an outpatient.
 - D. Call interventional radiotherapy to perform "CT guided Percutaneous aspiration".
 - E. Admit the patient for exploratory laparotomy, TAH and BSO
70. A 32 year old woman with Polycystic ovarian syndrome has infertility of 1 year's duration. Her menses occur at irregular intervals, and basal body temperature is monophasic. An endometrial biopsy shows endometrial hyperplasia with mild atypia. The most appropriate therapy is?
- A. Danazol
 - B. Megrostol acetate
 - C. Oral contraceptive
 - D. Clomiphene citrate
 - E. Human Gonadotropins
71. A 42 years old lady overweight and smoker attends your clinic and complains of heavy periods. An ultrasound scan reveals a normal uterus. She would like a long term treatment with minimal side effects that would offer treatment for the menorrhagia and provide contraception although she is still unsure if she would like children in the future. What is the most appropriate management?
- A. Combined oral contraceptive pills
 - B. Endometrial ablation
 - C. Levonorgestrel intra-uterine system
 - D. Progestogen implant
 - E. Copper intrauterine contraceptive device

72. Your next patient is a 65-year-old G2P2 new patient who has been referred from her primary care provider for recurrent yeast vaginitis. Review of her outside medical records reveals five episodes of vulvar pruritus that were treated with oral and vaginal antifungal pruritus has been persistent for more than a year. She was married for 35 years but is now widowed and has not been sexually active in 3 years. You examine her and find a thin white atrophic epithelium and a contracted, small introitus. There is loss of the normal architecture of the labia minora. An area of hypopigmentation surrounds the labia and the anus in a figure-of-eight pattern. Wet prep shows a pH of 5.5, rare pseudohyphae, no lactobacilli, no WBC or RBC, and rare clue cells. What would you do next?
- A. Collect fungal cultures
 - B. Screen for gonorrhea and chlamydia
 - C. Prescribe a longer course of oral fluconazole (Diflucan)
 - D. Check a fasting glucose level
 - E. Perform a vulvar biopsy
73. A couple presents to your clinic because they have been trying to conceive for 18 months. During the interview you learn that the man has fathered a child in a previous relationship and is in good health. The woman is 28 and reports that she has had painful menses for the past 5 or 6 years. After completing your history, you explain to your patient that you need to perform an examination before making any recommendations. You explain that women with endometriosis often have a normal examination but that there are certain findings that are associated with endometriosis. During your examination, which of the findings listed below would NOT increase your suspicion that she has endometriosis?
- A. A fixed deviated uterus
 - B. Uterosacral nodularity on rectovaginal examination
 - C. Tender adnexa
 - D. An enlarged irregular uterus
 - E. A fixed adnexal mass
74. Ms. Anna is a 29-year-old G2P1 woman of 22 weeks' pregnant who reports of pelvic bulge and bothersome pressure. Physical examination reveals cervical prolapse, approaching the opening of the vaginal introitus. She is worried that the prolapse will worsen as the pregnancy progresses. What can you offer this patient for her symptomatic prolapse?
- A. Pessary trial
 - B. Reassessment after delivery but nothing during the pregnancy
 - C. Cerclage
 - D. Hysteropexy
 - E. Uterosacral ligament fixation

75. You are called to review a 72 years old woman complains of vaginal bleeding. On evaluation, a 2cm vaginal lesion is found in the upper third of the anterior vagina. On bimanual and rectovaginal examination, the mass extends to the lateral pelvic wall. On biopsy, vaginal carcinoma is confirmed. What stage cancer does this patient most likely have?
- A. 0
 - B. I
 - C. II
 - D. III
 - E. IV
76. A 48-year-old woman who had two normal pregnancies 13 and 15 years ago presents with the complaint of amenorrhea for 7 months visits your clinic and She expresses the desire to become pregnant again. After exclusion of pregnancy, which of the following tests is next indicated in the evaluation of this patient's amenorrhea?
- A. Hysterosalpingogram.
 - B. Endometrial biopsy.
 - C. Thyroid function test.
 - D. Testosterone and DHAS levels.
 - E. LH and FSH levels.
77. A 34 year old lady comes to you for removal of an intrauterine device. On speculum examination, the cervix is visualised but the intrauterine device thread is not seen. Her last menstrual period is 2 weeks ago and she has been having regular sexual intercourses with her partner. She has a negative pregnancy test. What is the appropriate action?
- A. Transabdominal ultrasound
 - B. Transvaginal ultrasound
 - C. Abdominal X-ray
 - D. Combined oral contraceptive pill
 - E. Repeat speculum examination under general anaesthesia
78. Ms. RN is receiving external beam radiation for treatment of metastatic endometrial cancer. The treatment field includes the entire pelvis. Which of the following tissues within this radiation field is the most radiosensitive?
- A. Vagina
 - B. Ovary
 - C. Rectovaginal septum
 - D. Bladder
 - E. Rectum

79. A 19-year-old woman comes to your office with a complaint of never having had menses. Physical examination shows that she is 1.37 m tall and weighs 42 kg. She lacks breast and pubic hair development. There is webbing of her neck and cubitus valgus. Which of the following is likely to be true?
- A. Testicular feminization.
 - B. Klinefelter syndrome.
 - C. Turner's syndrome.
 - D. Congenital adrenal hyperplasia.
 - E. Normal but delayed development.
80. A 49-year-old woman comes at the OPD complaining that several years it feels as though "her organs are progressively falling out her vagina" along with this, she complains of losing urine with straining, occasional urgency, and sometimes a feeling of incomplete emptying of her bladder with voiding. On further examination you will find :
- A. Rectocele
 - B. Cystocele
 - C. Enterocoele
 - D. Complete uterine prolapse
 - E. UTI
81. A 31-year-old obese woman presents to your office for an infertility consultation. She and her husband have been attempting pregnancy for the preceding 18 months. She states that her menses are irregular, occurring every 25 to 47 days, and sometimes she skips menses altogether. They are sometimes heavy, other times light with just brown spotting. She notes that her menses have always been this way, ever since menarche at age 12. She denies any history of sexually transmitted infections and her husband has proven paternity with a previous wife. She notes that she has never been pregnant. On further questioning, she admits to plucking and shaving excessive hair from her chin, around her navel, and on her lateral thigh. She also admits to bothersome acne and extreme difficulty with weight loss. Physical examination reveals obesity with BMI 31, normal breast development, and presence of excessive hair as described by the patient. Pelvic examination reveals normal external genitalia and unremarkable bimanual examination. What additional information do you need to make your diagnosis?
- A. Day 3 serum FSH and estradiol
 - B. Pelvic ultrasound
 - C. Serum testosterone, DHEA-S, and prolactin
 - D. None of the above
 - E. All of the above

82. On a routine-screening CBC, a 1year old child is noted to have a microcytic anemia. A follow up hemoglobin electrophoresis demonstrates an increased concentration of hemoglobin A2. The most appropriate next step in the management of this child's condition is which of the following?
- A. Initiate oral iron therapy.
 - B. Provide family counseling alone.
 - C. Begin oral, daily folate, and penicillin therapy.
 - D. Arrange for a bone marrow aspiration.
 - E. Initiate therapy with dimercaptosuccinic acid (Succimer).
83. A father brings his 3years old daughter to the emergency department after noting her to be pale and tired and with a subjective fever for several days. Her past history is significant for an upper respiratory infection 4 weeks prior, but she had been otherwise healthy. The father denies emesis or diarrhea, but does report his daughter has had leg pain over the previous week, waking her from sleep. He also reports that she has been bleeding from her gums after brushing her teeth. Examination reveals a listless pale child. She has diffuse lymphadenopathy with splenomegaly but no hepatomegaly. She has a few petechiae scattered across her face and abdomen and is mildly tender over her shins, but does not have associated erythema or joint swelling. A CBC reveals a leukocyte count of 8,000/ μ L with a hemoglobin of 4 g/dL and a platelet count of 7,000/ μ L. The automated differential reports an elevated number of atypical lymphocytes. Which of the following diagnostic studies is the most appropriate next step in the management of this child?
- A. Epstein-Barr virus titers
 - B. Serum haptoglobin
 - C. Antiplatelet antibody assay
 - D. Reticulocyte count
 - E. Bone marrow biopsy
84. A 10years old boy is admitted to Temeke hospital because of bleeding. Pertinent laboratory findings include a platelet count of 50,000/ μ L, prothrombin time of 15 seconds (control 11.5 seconds), activated partial thromboplastin time of 51 seconds (control 36 seconds), thrombin time of 13.7 seconds (control 10.5 seconds), and factor VIII level of 14% (normal 38%-178%). Which of the following is the most likely cause of his bleeding?
- A. Immune thrombocytopenic purpura (ITP)
 - B. Vitamin K deficiency
 - C. Disseminated intravascular coagulation (DIC)
 - D. Hemophilia A
 - E. Hemophilia B

85. A 35 week preterm female is 4 hours old. She was born by emergency LSCS due to breech position after preterm labour. Her mother received 1.2g IV benzyl penicillin 3 hours before delivery. APGARs were 9¹ and 9⁵ respectively and birth weight was 2600g. She has now had 4 episodes of apnea >20 seconds, with her HR dropping to <80 beats per minute and her SPO₂ to <70%. She requires firm stimulation to resolve these episodes and between episodes her SPO₂ goes up to 96% on room air. Her examination is normal. Which one is the MOST appropriate next step in the management of her apnea?
- A. Administer IV caffeine
 - B. Place her on 100% oxygen
 - C. Intubate and ventilate the baby
 - D. Perform a septic work-up and start IV antibiotics
 - E. Start continuous positive airway pressure (CPAP) ventilation
86. A 13 months old female baby presents to the emergency department with difficulty in breathing. On examination, she has intercostal recessions and a bilateral widespread wheeze. Her temperature is 37.9 C and respiratory rate is 35 breaths/minute. What is the SINGLE most likely diagnosis?
- A. Bacterial upper respiratory tract infection
 - B. Pneumonia
 - C. Bronchiolitis
 - D. Respiratory distress syndrome
 - E. Alpha 1 antitrypsin deficiency
87. You are on call on postnatal ward and the mother calls with concerns of her newborn. Her baby was born at term by an uncomplicated vaginal delivery in the birthing Centre yesterday evening. The baby is feeding well and not irritable. This is parents' first child and the parents are especially concerned as the baby has a yellowish color to his skin and eyes. What is the SINGLE most appropriate management?
- A. Reassure
 - B. Reassure and advise to seek medical opinion if jaundice continues beyond 2 weeks' time
 - C. Make an outpatient appointment for the newborn at the paediatric jaundice clinic
 - D. Inform the community midwife
 - E. Advise to return to the hospital and to be seen within the next 2 hours

88. A 16-year-old boy is referred to your practice for leg claudication. Blood pressure in his right arm is 150/110 mmHg, while blood pressure in his left leg is 80/60 mmHg. On auscultation, a systolic murmur best heard over the middle of the upper back is detected. You also find that the patient's femoral pulses are diminished when compared to his brachial pulses. Which of the following is the most likely diagnosis?
- A. Patent ductus arteriosus
 - B. Ventricular septal defect
 - C. Coarctation of the aorta
 - D. Atrial septal defect
 - E. Tetralogy of Fallot
89. Madenge who is 7-year-old boy is brought to your office at Lugalo hospital by her mother because of a rash that appeared 3 days ago. Her temperature is 37.2°C and her face has an intense rash with a "slapped-cheek" appearance. The most likely etiologic agent is?
- A. Adenovirus
 - B. Rotavirus
 - C. Parvovirus
 - D. Coxsackievirus
 - E. Echovirus
90. Previously healthy 5-day-old male who was born at home develops bruising and melena. The pregnancy, delivery, and postnatal course were unremarkable. The infant is breastfeeding vigorously every 2 hours. Findings on physical examination are unremarkable except for several large bruises. Laboratory testing reveals: haemoglobin of 81 g/L (8.1 g/dL); white blood cell count, $9.4 \times 10^9/L$ (9,400/mm³); prothrombin time of 37 seconds; partial thromboplastin time of 39 seconds; platelet count of $242 \times 10^9/L$ (242,000/mm³); and fibrinogen, 2.34 g/L (234 mg/dL). Of the following, the MOST likely cause of the bleeding is?
- A. Liver disease
 - B. Vitamin K deficiency
 - C. Von Willebrand's disease
 - D. Factor VIII deficiency haemophilia
 - E. Disseminated intravascular coagulation

91. For the past year, a 12years old boy has had recurrent episodes of swelling of his hands and feet, which has been getting worse recently. These episodes occur following exercise and emotional stress, last for 2 to 3 days, and resolve spontaneously. The last episode was accompanied by abdominal pain, vomiting, and diarrhea. The results of routine laboratory workup are normal. An older sister and a maternal uncle have had similar episodes, but they were not given a diagnosis. He presents today with another episode. Which of the following is the most likely diagnosis?
- A. Systemic lupus erythematosus
 - B. Heart failure
 - C. Congenital nephrotic syndrome
 - D. Angioedema
 - E. Henoch-Schönlein purpura
92. A term large for gestational age newborn infant was born 50 hours ago by cesarean section to a 26-year-old primigravida mother with insulin-dependent gestational diabetes. The infant's initial glucose was 1.4mmol/L, but after feeding subsequent glucoses have all been above 3.3mmol/L. The infant is now diaphoretic and irritable, and seems to have some twitching and tremors of the extremities. The most likely cause of this infant's problems is which of the following?
- A. Hyponatremia
 - B. Hypocalcemia
 - C. Hypoglycemia
 - D. Hyperphosphatemia
 - E. Hypokalemia
93. Halima is a 19years old primiparous woman, develops toxemia in her last trimester of pregnancy and during the course of her labor is treated with magnesium sulfate. At 38 weeks' gestation, she delivers a 2100g infant with Apgar scores of 1 at 1 minute and 5 at 5 minutes. Laboratory studies at 18 hours of age reveal a hematocrit of 79%, platelet count of 100,000/ μ L, glucose 41 mg/dL, magnesium 2.5 mEq/L, and calcium 8.7 mg/dL. Soon after, the infant has a generalized seizure. Which of the following is the most likely cause of the infant's seizure?
- A. Polycythemia
 - B. Hypoglycemia
 - C. Hypocalcemia
 - D. Hypermagnesemia
 - E. Thrombocytopenia

94. A 5 weeks old male infant presents to clinic with jaundice during routine check-up. His mother reports a normal vaginal delivery at term with a birth weight of 3.5 kg. On examination, the baby is irritable, below average centiles for weight, and the liver is enlarged. Pale stools and dark urine on diaper were observed. The mother is currently not breastfeeding and had picked him on formula. What is the SINGLE most likely diagnosis?
- A. Galactosemia
 - B. Glucose-6-phosphate dehydrogenase (G6PD) deficiency
 - C. Rh incompatibility
 - D. Congenital viral infection
 - E. Biliary atresia
95. Oral medications are often used as an early treatment for generalized spasticity. Which of the following works at the level of skeletal muscle to block calcium release from the sarcoplasmic reticulum?
- A. dantrolene sodium
 - B. clonidine
 - C. tizanidine
 - D. baclofen
 - E. diazepam
96. You are following a 6years old boy for iron deficiency anemia. Two months after initiation of therapy (6 mg/kg/day of elemental iron), there has been minimal improvement in the hemoglobin and ferritin levels despite adequate adherence. Findings on history and physical examination are normal. What is the MOST appropriate investigation to perform NEXT?
- A. serology for anti-tissue transglutaminase levels
 - B. upper gastrointestinal (GI) series with small bowel follow-through
 - C. upper endoscopy
 - D. bone marrow aspirate
 - E. Full Blood Count
97. You are caring for a 14years old adolescent boy with trisomy 21. Which of the following tests is MOST appropriate to order on an annual basis, as part of the regular health supervision for this adolescent?
- A. ECG
 - B. thyroid function
 - C. sleep oximetry
 - D. x-rays of the cervical spine
 - E. None of the above

98. A 37-week gestation boy is born after an uncomplicated pregnancy to a 33-year-old mother. At birth, he was lethargic and had an HR of 40 bpm. Oxygen was administered via bag and mask, and he was intubated; his HR remained at 40 beats/min. Which of the following is the most appropriate next step?
- Administer IV bicarbonate.
 - Administer IV atropine.
 - Administer IV epinephrine.
 - Administer IV calcium chloride.
 - Begin chest compressions
99. You are on call at the postnatal ward at Kenyatta hospital and a 8-day-old infant continues to have jaundice which was first noted on the second day of life; his latest total and direct bilirubin levels are 12.5 and 0.9 mg/dL, respectively. The baby and the mother have type O positive blood, the direct and indirect Coombs tests are negative, the infant's reticulocyte count is 15%, and a smear of his blood reveals no abnormally shaped cells. He is bottle feeding well, produces normal stools and urine, and has gained weight well. Which of the following remains in the differential diagnosis?
- Gilbert syndrome
 - Disseminated intravascular coagulation
 - Spherocytosis
 - Polycythemia
 - An undiagnosed blood group isoimmunization
100. Which of the following is a potentially distinguishing feature of osteogenesis imperfecta versus rickets?
- Poor muscle tone
 - Easily fractured long bones
 - Increased susceptibility to respiratory infections
 - Small stature
 - Blue sclera

101. A 14-year-old boy with known SCD is being admitted for vasoocclusive crisis. He has been receiving IV fluids and IV narcotics for the last 2 days. He seemed to be getting better, but the nurse has just called you and stated his temperature is now 38°C. On examination, you find his respiratory rate to be 32 breaths/min, and his oxygen saturation is 90%. What is the next step in management?
- A. Order spiral CT.
 - B. Initiate antibiotics and provide supplemental oxygen via nasal cannula.
 - C. Obtain STAT hemoglobin level.
 - D. Initiate incentive spirometry.
 - E. Administer another dose of narcotics.
102. A 2-year-old girl has increased work of breathing. Her father notes she has had cough and subjective fever over the past 3 days. She has been complaining that her "belly hurts" and has experienced one episode of posttussive emesis, but no diarrhea. Her immunizations are current, and she is otherwise healthy. Her temperature is 38.9°C. She is somnolent but easily aroused. Respirations are 28 breaths/min, and her examination is remarkable for decreased breath sounds at the left base posteriorly with prominent crackles. Which of the following acute interventions is the next best step in your evaluation?
- A. Blood culture
 - B. Chest radiography
 - C. Pulse oximetry
 - D. Sputum culture
 - E. Viral nasal swab
103. At a routine healthy clinic visit of a 3-year-old child, you detect a systolic murmur that has never been heard before. In addition, the cardiac examination demonstrates a right ventricular impulse in the precordium and a widely split second heart sound. An electrocardiogram demonstrates right ventricular hypertrophy. What is the most likely heart lesion in this child?
- A. Atrial septal defect
 - B. Coarctation of Aorta
 - C. Mitral valve prolapse
 - D. Patent ductus arteriosus
 - E. Isolated tricuspid regurgitation

104. A female is born via spontaneous vaginal delivery at 28 weeks of gestation because of preterm labor. Which of the following would be a risk factor for CP?
- A. Hypoglycemia
 - B. Apnea of prematurity
 - C. Intraventricular hemorrhage
 - D. Blood transfusion
 - E. Mechanical ventilation
105. A 9years old boy is brought to the hospital by his parents with severe shortness of breath. He has a history of asthma and has become unwell over the past few days with a productive cough. His symptoms are worsening and he feels the salbutamol inhalers are no longer effective in helping breathe. On examination, he has a widespread wheeze on auscultation. There are intercostal recessions and use of accessory muscles. His oxygen saturations were 88% at room air and respiratory rate was 45 breaths/minute. Oxygen was immediately commenced. He was given back to back nebulizers with salbutamol and ipratropium bromide. Intravenous hydrocortisone was administered. Due to poor response, he was given intravenous salbutamol and intravenous aminophylline. His symptoms continue to deteriorate with signs of exhaustions and poor respiratory effort. What is the next most appropriate medications to be considered?
- A. Nebulised corticosteroids
 - B. Intravenous magnesium sulphate
 - C. Oral monteleukast
 - D. Intramuscular adrenale
 - E. Nebulized adrenaline
106. You receive a 5years old boy at OPD for several days of swelling. His mother first noted some upper respiratory symptoms including rhinorrhea and non-productive cough about 2 weeks ago with no fevers. He initially seemed to get better, but swelling of his eyelids started 2days ago, prompting her to give him antihistamine the past two evenings. The swelling has persisted and spread to his face, abdomen and hands. The child has also decreased appetite and fatigue. Primarily, he complains of some abdominal discomfort with no vomiting or diarrhea. His weight is 20.2kg, HR of 122bpm and blood pressure of 85/52 mmHg. He has notable swelling of his face, eyelids and distal extremities, his lungs are clear, the abdomen is fairly distended. The reminder of his examination is normal. Urinalysis reveals trace blood with 4+ and Ph 5 other findings are normal. Which of the following laboratory results would be most unexpected?
- A. Serum sodium of 129 mEq/L
 - B. Serum bicarbonate of 12 mEq/L
 - C. Serum albumin of 1.8 g/dL
 - D. Serum calcium of 7.0 mg/dL
 - E. Serum creatinine of 0.6 mg/dL

107. A mother brings her 3years old son with Down syndrome to your clinic because his gums have been bleeding for 1 week. She reports that he has been less energetic than usual. Examination reveals that the child has an oral temperature of 37.8°C, pallor, splenomegaly, gingival bleeding, and bruises on the lower extremities. Which of the following is most likely?
- A. Aplastic anemia
 - B. Idiopathic thrombocytopenic purpura
 - C. Leukemia
 - D. Leukemoid reaction
 - E. Megaloblastic anemia
108. A previously healthy 18months child has been in a separate room from his family. The family notices the sudden onset of coughing, which resolves over a few minutes. Subsequently, the patient appears to be normal except for increased amounts of drooling and refusal to take foods orally. The most likely explanation for this toddler's condition is;
- A. Severe gastroesophageal reflux
 - B. Foreign body in the airway
 - C. Croup
 - D. Epiglottitis
 - E. Foreign body in the esophagus
109. A 5 weeks neonate born to a HIV positive mother was brought to the health facility for vaccination today. Her mother was started on a combination of Effervirenz/Tenofovir/Lamivudine during pregnancy and has opted for breastfeeding. In addition to the vaccination, In Tanzania guidelines what is the recommended blood sample to be taken from this child today?
- A. CD4 testing
 - B. Viral load test
 - C. Dry blood spot
 - D. Rapid test for HIV
 - E. HIV resistance test
110. A 16 years old girl, newly diagnosed with HIV today, has CD4 count 980cells/mm³. She has been apparently well until when she went for medical checkup as a requirement for her medical examination report attached to her new school joining instruction. According to the Tanzania national guideline which of the following statement is correct;
- A. She should start Nevirapine prophylaxis
 - B. She should start Antiretroviral treatment
 - C. She should start Cotrimoxazole prophylaxis
 - D. She should start ARV when CD4 drops below 350 cells/mm³
 - E. She should start ARV when CD4 drops below 500 cells/mm³

111. A 10years old boy was healthy until about 10 days ago when he developed 7 days of fever, chills, severe muscle pain, pharyngitis, headache, sclerae injection, photophobia, and cervical adenopathy. After 7days of symptoms, he seemed to get better, but yesterday he developed fever, nausea, emesis, headache, and mild nuchal rigidity. Cerebrospinal fluid (CSF) shows; 200 WBC/ μ L (all monocytes) and an elevated protein. Correct statement about this infection include which of the following?
- A. The condition is obtained from arthropod vectors.
 - B. Central nervous system involvement is uncommon.
 - C. Most cases are mild or subclinical.
 - D. Appropriate treatment includes intravenous (IV) immune globulin (IVIG) and aspirin.
 - E. Hepatic and renal involvement occurs in the majority of cases.
112. Juma is a 3years old boy and is brought to OPD by his grandmother with failure to thrive for 5 months. Her body weight is 8kg and her height is 100cm. Weight for Height is between -2SD and -3SD. The management of this child includes;
- A. High protein diet
 - B. RUTF 2 Sachets a day
 - C. F75 110mls/kg for 24hours
 - D. F100 110mls/kg for 24hours
 - E. Ceftriaxone 100mg/kg od for 5 days
113. Which of the following is considered appropriate treatment option for a 53years old woman who develops two liver metastases two years following left modified radical mastectomy, chest wall radiation, systemic chemotherapy (A+C), and tamoxifen therapy for her T2N2, estrogen receptor positive, and HER2/neu negative invasive ductal carcinoma?
- A. Aromatase inhibitor
 - B. Trastuzumab
 - C. Radiation therapy to the liver
 - D. Liver resection
 - E. Increase tamoxifen dose

114. A 35-year-old woman presents to your clinic with the complaint of a lump in her left breast. She first noticed the mass two weeks ago in the shower and the patient says that she has not noticed whether the mass appears and disappears with the occurrence of her menses. The patient's past medical history was insignificant and she claims that she is on no long term medication. Further questioning reveals that the patient has no further complaints of night sweats, weight loss or a fever and this is the first breast mass that she has noticed. She has no family history of breast cancer. On physical examination, it was revealed that a 2.5 cm by 1.5 cm mass is present in the left lower quadrant of her left breast. The mass was regular and firm in consistency and was non-tender and mobile. The skin over her left nipple appeared to be normal and no discharge from her left nipple could be appreciated. The rest of the breast examination was unremarkable with no enlarged lymph nodes palpated in her neck or axillary region. Examination of her right breast was unremarkable. Fine needle aspiration was subsequently done. The results show duct-like epithelium surrounded by fibrous bridging. What is the most likely diagnosis?
- A. Fibroadenoma
 - B. Fibroadenosis
 - C. Breast cancer
 - D. Fat necrosis
 - E. Sclerosing adenosis
115. A 41-year-old man complains of regurgitation of saliva and of undigested food. An esophagram reveals a dilated esophagus and a bird's-beak deformity. Manometry shows a hypertensive lower esophageal sphincter with failure to relax with deglutition. Which of the following is the safest and most effective treatment of this condition?
- A. Medical treatment with sublingual nitroglycerin, nitrates, or calcium-channel blockers
 - B. Repeated bougie dilations
 - C. Injections of botulinum toxin directly into the lower esophageal sphincter
 - D. Dilation with a Gruntzig-type balloon
 - E. Surgical esophagomyotomy

116. A 60-year-old previously healthy businessman notices that his eyes are yellow and he has been losing weight. On physical examination the patient has jaundice and scleral icterus with a palpable mass in the right upper quadrant. Abdominal ultrasound demonstrates biliary ductal dilation without gallstones. Which of the following is the most appropriate next step in the workup of this patient?
- A. Esophagogastroduodenoscopy (EGD)
 - B. Endoscopic retrograde cholangiopancreatography (ERCP)
 - C. Acute abdominal series
 - D. Computed tomography (CT) scan
 - E. Positron emission tomography (PET) scan
117. A 43-year-old man presents to the emergency department with severe abdominal pain and substernal chest pain. The patient's symptoms began approximately 12 hours earlier after he returned from a party where he consumed a large amount of alcohol that made him ill. Subsequently, he vomited several times and then went to sleep. A short time thereafter, he was awakened with severe pain in the upper abdomen and substernal area. His past medical history is unremarkable, and he is currently taking no medications. The patient appears uncomfortable and anxious. His temperature is 38.8°C, pulse rate 120 beats/min, blood pressure 126/80 mmHg and respiratory rate 32 breaths/min. The findings from an examination of his head and neck are unremarkable. The lungs are clear bilaterally with decreased breath sounds on the left side. The cardiac examination reveals tachycardia and no murmurs, rubs, or gallops. The abdomen is tender to palpation in the epigastric region, with involuntary guarding. The results of a rectal examination are normal. Laboratory studies reveal that his white blood count is 26,000/mm³ and that his hemoglobin, hematocrit, and electrolyte levels are normal. The serum amylase, bilirubin, aspartate transaminase (AST), alanine transaminase (ALT), and alkaline phosphatase values are within normal limits. A 12-lead electrocardiogram shows sinus tachycardia. His chest radiograph reveals moderate left pleural effusion, a left pneumothorax, and pneumomediastinum. What is the most likely diagnosis?
- A. Diaphragmatic perforation
 - B. Mallory-Weiss syndrome
 - C. Esophageal perforation
 - D. Aortic dissection
 - E. Hemopneumothorax

118. You are registrar at Dodoma general hospital, you attend a 45years old man diagnosed with an exophytic adenocarcinoma of the distal esophagus that penetrates to but does not penetrate through the muscularis propria. A CT scan of the chest does not demonstrate evidence of distant metastases. Which of the following is the most appropriate treatment?
- A. Placement of endoscopic stent to relieve obstruction and initiate chemotherapy
 - B. Initiation of chemotherapy followed by endoscopic resection of the tumor, if tumor shrinkage is achieved
 - C. Initiation of chemotherapy followed by esophagectomy and additional postoperative chemotherapy
 - D. Nutritional therapy followed by esophagectomy
 - E. Combined chemoradiation
119. Assuming you are the attending medical doctor and 60years old man comes to you with 10years history of achalasia. His dysphagia has been worsening, and he underwent an esophageal dilation; shortly after this procedure, he develops acute chest pain, tachycardia, and fever 6 hours after esophageal dilatation for achalasia. Which of the following diagnostic procedures is most appropriate for this patient?
- A. A barium esophagogram
 - B. A Gastrografin esophagogram
 - C. Esophagoscopy
 - D. Chest x-ray
 - E. Upright abdominal x-ray
120. A 42years old man has bouts of intermittent crampy abdominal pain and rectal bleeding. Colonoscopy is performed and demonstrates multiple hamartomatous polyps. The patient is successfully treated by removing as many polyps as possible with the aid of intraoperative endoscopy and polypectomy. Which of the following is the most likely diagnosis?
- A. Ulcerative colitis
 - B. Villous adenomas
 - C. Familial polyposis
 - D. Peutz-Jeghers syndrome
 - E. Crohn colitis

121. While doing your internship at Kigoma regional hospital, a 17-year-old high school student presents to you with a painful fluctuant mass in the midline between the gluteal folds. Rectal exam is unremarkable with no masses, fluctuance, or tenderness. Which of the following is the most likely diagnosis?
- A. Pilonidal abscess
 - B. Perianal abscess
 - C. Perirectal abscess
 - D. Fistula-in-ano
 - E. Anal fissure
122. A 57-year-old asymptomatic man comes to you on his regular medical checkup. You note him to have a prostate that is normal in shape and size on rectal examination. His PSA level is 38 ng/mL (normal; 2.5 ng/mL). Which of the following is the best next step for this patient?
- A. Observation
 - B. Transrectal ultrasound examination with a prostate biopsy
 - C. Repeated PSA testing in 6 months
 - D. CT scan of the abdomen and pelvis
 - E. Initiation of finasteride therapy
123. While at Mbeya zonal hospital, a 40-year-old female underwent a laparotomy one week ago. On day 6 post-operatively, you are asked to review her by the nurse in charge. The patient complains that she has not been able to open her bowels since the operation and that she has vomited twice since yesterday. Her past medical history includes hypertension, diagnosed two years ago, for which she takes Lisinopril. She has a twenty-pack-year smoking history. She does not drink alcohol at all. On examination, the patient appears to be anxious and uncomfortable. She is also noted to be overweight. She has a distended abdomen and no bowel sounds can be auscultated. There is no tenderness on palpation, apart from some mild discomfort around the laparotomy site. A plain X-ray of her abdomen revealed gas distributed throughout the small and large gut. Minor fluid levels were seen on an erect abdominal X-Ray. Her vitals are as follows: BP 130/82 mmHg and HR 90 bpm. What is the next best step to manage this patient?
- A. Immediate laparotomy
 - B. Nasogastric tube insertion and intravenous fluids
 - C. Observe for 48 hours
 - D. Administer laxatives
 - E. Conservative management with anti-muscarinic agents

124. A 33-year-old woman from Tabora is attended at a regional hospital with a history of three previous C-sections. She presents to the hospital with her third bout of small bowel obstruction over the past 2 years. She has been managed with nonoperative treatment consisting of NG suction, NPO, and IV fluid for the past 4 days. With her course of management, the patient has had a decrease in abdominal distension, but her NG tube output has diminished but continues to be bilious and voluminous (currently 600 mL/24 h). Which of the following is the most appropriate management option?
- A. Place a central venous catheter for total parenteral nutrition (TPN) administration and continue her nonoperative treatment for an additional 2 weeks.
 - B. Obtain a CT scan.
 - C. Perform a laparotomy.
 - D. Remove her NG tube and initiate PO feedings.
 - E. Prescribe an enema to stimulate bowel activity.
125. An elderly woman presents to the emergency department with postprandial RUQ pain, nausea, and emesis over the last 12 hours. The pain is persistent and radiates to her back. She is afebrile, and her abdomen is tender to palpation in the RUQ. Sonography demonstrates cholelithiasis, gallbladder wall thickening, and a dilated CBD measuring 12mm. Laboratory studies reveal the following values: WBC count 13,000/mm³, AST 220 U/L, ALT 240 U/L, alkaline phosphatase 385 U/L and direct bilirubin 4.0 mg/dL. Which of the following is the most appropriate treatment at this time?
- A. Admit the patient to the hospital, provide intravenous hydration, and check hepatitis serology values.
 - B. Admit the patient to the hospital and perform a laparoscopic cholecystectomy.
 - C. Admit the patient to the hospital, provide intravenous hydration, begin antibiotic therapy, and recommend ERCP.
 - D. Provide pain medication in the emergency department and ask the patient to follow up in the clinic.
 - E. Schedule the patient for laparotomy with cholecystectomy and liver biopsy.

126. A 45years old man presents to you with right upper quadrant abdominal pain. Vital signs show a temperature of 38°C heart rate 100 beats/minute, blood pressure 135/90 mmHg. CT scan shows a large, calcified cystic mass in the right lobe of the liver. He denies any recent travel. Echinococcus is suggested by the CT findings. Which of the following is the most appropriate management of echinococcal liver cysts?
- A. Percutaneous catheter drainage
 - B. Medical treatment with albendazole
 - C. Medical treatment with steroids
 - D. Medical treatment with metronidazole
 - E. Surgical resection of the cysts
127. An elderly obese man of approximately above 50years of age has become irritable, his face has changed to a round configuration, he has developed purplish lines on his flanks, and he is hypertensive. A 24 hour urine collection demonstrates elevated cortisol levels. This is confirmed with bedtime cortisol measurements of 700 ng/ mL. Which of the following findings is most consistent with the diagnosis of Cushing disease?
- A. Decreased ACTH levels
 - B. Glucocorticoid use for the treatment of inflammatory disorders
 - C. A 3-cm adrenal mass on computed tomography (CT) scan
 - D. Suppression with high-dose dexamethasone suppression testing
 - E. A 1-cm bronchogenic mass on magnetic resonance imaging (MRI)
128. You attend a 66years old woman at ED with a history of having passage of several maroon colored stools earlier in the day. She complains of feeling light-headed following these episodes. The patient has a history of hypertension and osteoarthritis. She takes metoprolol and NSAIDs daily. Her initial blood pressure is 100/85 mmHg, and heart rate is 90 beats/min. Her initial hematocrit is 34%. The patient's blood pressure improves with initial IV fluid resuscitation. An NG tube was placed and gastric lavage reveals only bilious fluid. During a 4hour period of observation in the resuscitation room the patient remains stable without further passage of bloody stools. Which of the following is the most appropriate next step?
- A. OGD
 - B. Mesenteric angiography
 - C. Abdominal CT scan
 - D. Colonoscopy
 - E. Pelvic X-ray

129. A 46years old intoxicated man was driving down the highway in the wrong direction when his vehicle struck a pickup truck head on. He presents with pulse rate of 130 beats/min, blood pressure of 90/62 mmHg and respiratory rate of 30 breaths/min. His pupils are 5 mm and are equally round and reactive bilaterally, he does not open his eyes to painful stimulus, he moans with painful stimulus, and he withdraws from painful stimulus. His oxygen saturation with oxygen by face mask is 86%. In addition to the possibility of closed head injury, what other factor most likely is a contributing factor for his low GCS?
- A. Hypoxia
 - B. Polysubstance abuse
 - C. History of seizure disorder
 - D. Alcohol intoxication
 - E. Chronic syphilis infection
130. An adult man sustains a stab wound to the abdomen 8cm superior to the umbilicus. His skin is cool and he is diaphoretic. His blood pressure is 74/40 mm Hg, and his pulse is 130 beats/min. His abdomen is distended and diffusely tender. Which of the following management possibilities is most appropriate?
- A. Abdominal CT scan
 - B. Diagnostic peritoneal lavage
 - C. Laparoscopy
 - D. Celiotomy
 - E. Local wound exploration
131. A 16years old adolescent boy is brought to the intensive care unit after multiple blunt trauma approximately 12 hours previously. His injuries included a femur fracture. He is noted to have a PO_2 of 60 mmHg, despite the use of 100% oxygen by rebreather mask and has become confused. The chest radiograph reveals clear lung fields and a normal cardiac size. Which of the following is the most likely diagnosis?
- A. Pulmonary contusion
 - B. Fat embolism
 - C. Atelectasis
 - D. ICU psychosis
 - E. Occult pneumothorax

132. You among one the doctors in a call team, a 24years old man comes to you with complains of colicky intermittent umbilical and right lower quadrant abdominal pain of 24 hours' duration. He complains of anorexia and nausea. His temperature is 36.7°C. Which of the following is the most likely diagnosis?
- A. Acute appendicitis
 - B. Chronic appendicitis
 - C. Gastroenteritis
 - D. Acute pancreatitis
 - E. Intussusception
133. Which of these is the most appropriate DVT prophylactic measure for a 36years old man who just underwent an exploratory laparotomy, distal pancreatectomy, splenectomy and gastric repair for a gunshot wound to the abdomen? The patient had approximately 3000 mL of blood loss prior to surgical control of his bleeding and repairs of his injuries. Following his operation, he has been stable in the ICU with a hematocrit of 28% and international normalized ratio (INR) of 1.7.
- A. LMW heparin.
 - B. 5000 U of fractionated heparin TID.
 - C. 5000 U of fractionated heparin BID.
 - D. Pneumatic compression devices.
 - E. Withhold DVT prophylaxis until the INR returns to normal.
134. Which of the following patients has the highest risk of developing colorectal cancer?
- A. A 45years old man whose younger brother has a history of colon cancer
 - B. A 30years old woman with a BRCA1 mutation
 - C. A 55years old man with a 15-year history of ulcerative colitis
 - D. A 50years old man with a history of resected adenomatous colonic polyps
 - E. A 44years old man with FAP syndrome (polyposis coli)
135. A 45years old woman attended at a tertiary hospital and is diagnosed with pancreatic cancer. The histology appears to be adenocarcinoma. Which of the following is most accurate regarding this type of malignancy?
- A. Most of these cancers are located in the head of the pancreas.
 - B. Right upper quadrant pain, fever, and jaundice are commonly seen.
 - C. Most of these cancers are located in the tail of the pancreas.
 - D. Curative surgery is typically obtained when the malignancy is located in body of the pancreas.
 - E. This tumor is highly chemosensitive.

136. You have received a 44years old man for being evaluated for possible anal fissure. Which of the following findings suggest the diagnosis of an anal fissure?
- A. Fever, a fluctuant mass, obesity, and diarrhea
 - B. Painless rectal bleeding, a purple anal mass, and an ulcer
 - C. Presence of a purulent sinus, erythema, and a fluctuant mass
 - D. A history of nighttime incontinence of gas and stool
 - E. Severe anal pain, a tear in the posterior anoderm, bleeding, and increased sphincter tone
137. A previously healthy 9months old boy is brought to the emergency department with severe, intermittent abdominal pain. During the attacks, which are episodic and occur every 10 to 15 minutes, the child draws his legs up to his abdomen. The child is vomiting and has haem positive stools. On physical examination, a tender, mobile, sausage shaped mass is found in the mid abdomen. Which of the following is the most likely diagnosis?
- A. Intussusception
 - B. Jejunal atresia
 - C. Neuroblastoma
 - D. Intestinal duplication cyst
 - E. Perforated appendicitis
138. You are attending 54years old man with lower back pain of 3 weeks' duration that has not diminished with rest. He is diagnosed with a "herniated disk." Which of the following describes the most common location of herniated disks in the lumbar spine region?
- A. L1-2
 - B. L2-3
 - C. L3-4
 - D. L4-5
 - E. L5-S1
139. Ms. Nyaru is a 47years old woman complaining of lower back pain with radiation to the right leg, and she is treated with ibuprofen and bed rest. Over the next 3 weeks, the patient's pain worsens, and she complains of difficulty with voiding and bowel movements. Which of the following is the most likely diagnosis?
- A. Spinal stenosis
 - B. Lumbar neoplasm
 - C. Cauda equina syndrome
 - D. Tuberculosis of the spine (Pott disease)
 - E. Compression fracture

140. You are working as a doctor in the surgical department. A 65years old man is in the ward following resection of an adenocarcinoma in his descending colon. During the operation, the surgeon also opted to do a left hemicolectomy. On the tenth postoperative day, he suddenly developed left abdominal pain. By the time he had alerted the nurse to his pain, three hours had already lapsed. The pain is severe and dull in nature and worsens when he moves or turns to his sides. There is no associated nausea or vomiting. His past medical history is significant for a back ground of chronic obstructive disease of which part of his medications include oral steroids. He also has a thirty pack-year smoking history. Upon physical examination, the patient appears to be anxious and lethargic. Abdominal examination reveals an area of tenderness at his left lower quadrant but no rigidity or guarding is present. Bowel sounds are sluggish. His vitals are as follows: Temperature 37.8 C, BP 130/82 mmHg and HR 100 bpm. What is the most likely cause of his pain?
- A. Paralytic ileus
 - B. Anastomotic leak
 - C. Pelvic haematoma
 - D. Metastatic spread
 - E. Intestinal obstruction
141. Mr. Kalunguyeye is a 60years old man who comes to you seeking medical attention because of recurrent urinary tract infections. The patient also reports a history of increasing difficulty in urination (decreased flow, straining, and hesitancy) over the last several months. A PSA level is mildly elevated and a prostate biopsy proves benign. Which of the following is the most appropriate initial management of this patient with benign prostatic hyperplasia?
- A. α -Adrenergic blocker
 - B. 5-Alpha reductase inhibitor
 - C. α -Adrenergic blocker and 5-alpha reductase inhibitor
 - D. Transurethral resection of the prostate
 - E. Open prostatectomy
142. A 35years old man involved in a motor vehicle crash is found to have multiple cerebral contusions within the left frontal lobe. His GCS is 6 and neurosurgery places an intracranial pressure monitor. His intracranial pressure is found to be 27 mmHg. Which of the following strategies should be attempted next to control his ICP?
- A. Administration of hypertonic saline
 - B. Administration of norepinephrine
 - C. Hyperventilation to obtain a Pco₂ of 20
 - D. Placement of the patient in Trendelenburg position
 - E. Avoidance of all sedating drugs

143. A 18years old football player from Namungo football club is seen in the emergency department with severe knee pain incurred after being hit by a tackler while running. Which of the following findings on physical examination is most sensitive for an anterior cruciate ligament injury?
- A. Positive anterior drawer test
 - B. Excessive varus laxity of the knee
 - C. Locked knee
 - D. Positive Lachman test
 - E. Positive posterior drawer test
144. A 54years old man with a history of seizure disorder has shoulder pain and deformity following a grand mal seizure. On examination his right arm is found to be adducted and internally rotated. Which of the following directions is his humeral head likely to dislocate following seizure activity?
- A. Anteriorly
 - B. Superiorly
 - C. Posteriorly
 - D. Laterally
 - E. Medially
145. A 65years old man from Njombe presents to you with acute onset of pain, swelling, and erythema of the left knee. He denies previous episodes or trauma to the knee. The differential diagnosis includes septic arthritis and gout. Which of the following is the best study to differentiate between gout and septic arthritis?
- A. White blood cell count
 - B. X-ray of the knee
 - C. Magnetic resonance imaging (MRI) of the knee
 - D. Bone scan
 - E. Evaluation of synovial fluid aspirate
146. A 34years old bodaboda driver is extricated from an automobile after a motor vehicle collision. The patient has an obvious deformity of his right thigh consistent with a femur fracture. Upon closer examination of the right thigh, there is bone visible through an open wound. He has palpable pulses and an ankle brachial index (ABI) = 1. In addition to IV antibiotics, which of the following is the most appropriate management of his open femur fracture?
- A. Observation
 - B. Splint placement
 - C. External fixation
 - D. Early irrigation and debridement
 - E. Four-compartment calf fasciotomies

147. Following an acute spinal cord injury, a patient presents with systemic hypotension and relative bradycardia. His bulbocavernosus reflex is present. This is characteristic of what type of response in acute spinal cord injuries;
- A. Spinal shock
 - B. Cardiac shock
 - C. Neurogenic shock
 - D. Septic shock
 - E. Hypovolemic shock
148. A 36years old male sustains an open segmental tibia fracture after a motor traffic crash associated with an overlying 8 cm soft tissue avulsion that requires skin grafting for soft tissue coverage. No vascular injury is identified. What is the most appropriate Gustilo Anderson classification of this injury?
- A. Type I
 - B. Type II
 - C. Type IIIA
 - D. Type IIIB
 - E. Type IIIC
149. A 3years old boy from Bukoba presents to you at OPD with irritability, fever, and a warm, swollen leg. Imaging shows an area concerning for osteomyelitis and trans cortical biopsy reveals multiple Salmonella species. This child most likely also has which of the following conditions?
- A. Osteogenesis imperfect
 - B. Child abuse
 - C. Thalassemia
 - D. Sick cell anemia
 - E. Renal failure
150. You examine a 2months old boy because he has been straining while passing stool and has a distended abdomen. He is very low on the growth chart for age. A contrast enema is ordered by the primary care physician which shows a contracted segment of colon with dilated proximal colon. Which of the following is the best test for definitive diagnosis?
- A. Colonoscopy
 - B. Defecography
 - C. Endoanal ultrasound
 - D. Anorectal manometry
 - E. Suction rectal biopsy