

2007 (10)

1. Name 5 causes (or examples) of non-infective fever belonging to different categories:
  1. Non-infective inflammation (connective tissues / rheumatologic disease e.g. arthritis, SLE, Sjogren's diseases),
  2. malignancies (lymphomas, pancreas / kidney tumours),
  3. Vasculitis (seronegative)
  4. Acute Myocardial Infarction, Cerebral infarction/ haemorrhage (stroke),
  5. Post operation,
  6. Drug reaction,
  7. Thyrotoxicosis.
2. (a) What are the 4 stages of clubbing of the fingers? 2008(2) 2009(1) 2010(1) 2011(2) 2012(2)
  1. floating sensation of nail bed
  2. loss of angle between nail bed and nail fold.
  3. increase in convexity (longitudinal curvature) of nail.
  4. drumstick appearance
- (b) Describe the 4 features that distinguish an enlarged spleen from the left kidney.
  1. Percussion : Spleen - dull (9-11 rib, mid-axillary line), L-Kidney - can be dull due to overlying gas in colon.
  2. Position : Spleen - anterior, L Kidney - bimanual palpation at lateral.
  3. Sub-costal gap : Spleen - NO. L-kidney - YES (Ballot-able)
  4. Notch : Spleen (if enlarged beyond 10cm below costal margin) have 1 /few notches on medial border anterior surface. Kidney - no notch.
3. Name 3 signs that are related to COPD and can be detected by inspection.
  1. Tachypnoea,
  2. use of accessory muscles of respiration.
  3. Cough. Wheeze.
  4. Sputum. Central cyanosis
4. List the steps you will take to measure blood pressure accurately using a mercury sphygmomanometer.
  1. Timing: (i) before anti-hypertensive intake (ii) no less than 1 hour after exercising/caffeine consumption, smoking (iii) allow 10min adjustment.
  2. Remove tight clothing from arm
  3. Support arm at heart level
  4. optimal cuff width = 40% of arm circumference (bladder encompass 2/3 of arm).
  5. wrap cuff around upper arm with cuff's lower edge 1 inch above antecubital fossa.
  6. pump up pressure above systolic pressure (until brachial pulse not felt), slowly release air from cuff.
  7. use stethoscope to listen for Korotkoff sound (1st clear tapping, repetitive sounds at least for 2 consecutive beats) at brachial artery.
  8. Observe sphygmomanometer & record =systolic pressure .
  9. 4th Korotkoff sound, record. = ~ 10 mmHg above diastolic bp. Muting.
  10. 5th Korotkoff sound = silent / knocking sound disappears. record. ~ = 2mmHg below diastolic bp.
  11. record both arm & note difference. take 2 measure per visit./ if elevated bp, repeat after few min between measurement.

5. (a) Define seizure.

Seizure : single, transient occurrence. an abnormal, sudden synchronisation of neural network in the cerebral cortex, causing uncontrolled generalised focal discharge to brain, causing symptoms that are apparent to either the patient or the observer.

(b) Name TWO causes of seizure.

trauma (injury), drugs, alcohol withdrawal

(c) Define epilepsy.

Recurring tendency / disposition to seizures (spontaneous, intermittent, abnormal electrical activity in part of the brain).

(d) Name TWO causes of epilepsy.

Brain : tumor, degenerative diseases of brain

6. (a) Name FOUR typical symptoms of intestinal obstruction.

colicky abdominal pain. abdominal distension. vomiting. constipation.

(b) Name TWO radiological features of intestinal obstruction on abdominal x-ray.

dilated loops of bowel (distended bowel) proximal to the obstruction

air-fluid levels in erect film

SBO : valvulae conniventes (mucosal folds of the small intestine)

(c) What is the commonest cause of small bowel obstruction?

Adhesion (60%), External hernia (20%), Virgin abdomen (20%)

(d) What is the commonest cause of large bowel obstruction?

Carcinoma (90%) Volvulus @ sigmoid (5%) Pseudo -obstruction (5%)

7. (a) Write FOUR important principles for examination of the back. (b) Name THREE symptoms and signs of acute lower limb ischaemia (c) Name THREE anatomical constituents of spine.

8. Regarding compile blood picture (a) Name the three components that we mainly study in complete blood picture (CBP) Complete blood cell counting - RBC, WBC & platelets, reticulocyte count, haemoglobin, Mean Cell Volume (MCV) of RBC.

(b) Name one disease or condition that will cause abnormality of each component mentioned in question (a).

a. Haemoglobin, MCV - anaemia.

b. White cell count - leucocytosis : infection / stress response/ malignancy / bone marrow diseases. leucopenia : poor immune status, bone marrow disease.

c. Platelet count - thrombo-cytosis : stress response, bone marrow diseases.

Thrombocytopenia : bone marrow disease, spleen disorder, sepsis, bleeding tendency.

2008 (12)

1. Describe the signs that can differentiate pneumonia from pneumothorax on examine the chest?

same : diminished chest wall expansion

Pneumonia = consolidation

dull percussion on affected side, increase in tactile vocal fremitus / vocal resonance)

+ bronchial breath sound, increased, pan-inspiratory / late inspiratory crackles & pleural rub

(bronchial breath sound : consolidation, fibrosis)

Pneumothorax = Collapse

+ flattening of chest wall, displacement of mediastinum, trachea deviation from affected side hyper-resonance on percussion on affected side + decreased vocal fremitus

+ reduced breath sounds on affected side (push lungs further away from chest wall)

+ signs of respiratory failure (eg cyanosis)

2. a) Define shock. A state of generalised inadequate perfusion of all cells & tissues to meet cellular metabolic needs, resulting from acute circulatory failure. Often life threatening as blood is body's carrier of nutrient & oxygen to cells, deficiency of these essential inputs to life could leads to irreversible injury & death.
- b) Name three different types of shock.
- Hypovolemic (reduction of blood volume),
  - cardiogenic (failure of cardiac pump, fall in Cardiac Output),
  - septic (overwhelming bacteria infection),
  - anaphylactic (immune mechanism - release of histamine & other mediators resulting in peripheral vasodilation and fluid extravasation),
  - neurogenic (spinal cord injury, loss of autonomic & motor reflexes below injury level - peripheral vasodilatation & pooling of blood - hypotension)
3. List the characteristic features required to make a diagnosis of Classical FUO (Fever of Unknown Origin).
- Temperature of  $> 38.3\text{C}$  (101F), duration : several times for 3 weeks , failure to reach a diagnosis despite one week of inpatient investigation.
  - 4 categories: classical FUO, hospital-acquired FUO (newly developed fever in hospital, failure to reach diagnosis after 3 days of investigation), immunocompromised or neutropenic FUO ( neutrophil count  $< 500$ ), and HIV-related FUO
4. (a) What are the 4 stages of clubbing of fingers?
- floating sensation of nail bed
  - loss of angle between nail bed and nail fold.
  - increase in convexity (longitudinal curvature) of nail.
  - drumstick appearance
- (b) Name 6 conditions associated with clubbing of figures.
- Respiratory : COPD, bronchiectasis, bronchial carcinoma, pleural & mediastinal tumours,
  - Cardiovascular : Subacute Infective endocarditis, congenital heart diseases, aneurysms
  - Liver : liver cirrhosis, IBD inflammatory bowel diseases
  - Thyroid : thyroid acropachy ( Graves' disease)
5. (i) What are the pulse characteristics of **Atrial Fibrillation**?  
completely irregular heart beat (both rate & volume)
- (ii) What are the causes of **Atrial Fibrillation**?
- hypertension
  - ischemic heart diseases
  - thyrotoxicosis,
  - pericarditis,
  - cardiomyopathy,
  - idiopathic
- (ii) Describe the important investigations of **Ischaemic Heart Disease**.
- ECG
  - cardiac enzymes (troponin, CPK, AST, LDH)
  - CT coronary angiogram
  - MRI cardiac perfusion
  - Treadmill exercise stress test,
  - Thallium radionuclide cardiac scan
  - cardiac cathetization
- (iv) What are the treatment strategy of patients suffering from **Ischaemic Heart Disease**?
- Bed-rest, O<sub>2</sub>,
  - medication : Nitrates (sublingual, buccal spray, oral), Aspirin, beta-blockers, Ca channel blockers.
  - Surgery : PCI / CABG.
  - Acute : thrombolytic agents - TNK, streptokinase. PCI -rescue. Risk factors modification.

2009

1. (a) What are the 4 stages of clubbing of fingers?
  1. floating sensation of nail bed
  2. loss of angle between nail bed and nail fold.
  3. increase in convexity (longitudinal curvature) of nail.
  4. drumstick appearance
2. (b) List 6 other stigmata of chronic liver diseases.
  1. vascular : spider angioma, scattered telangiectasia, purpura, ankle pigmentation
  2. hand : palmar erythema, dupuytren's contracture, flapping tremor, leukonychia, clubbing
  3. jaundice
  4. fetor hepaticus
  5. gynaecomastia / testicular atrophy
  6. ascites, fluid retention
  7. hepatic encephalopathy
3. List 5 possible causes of Nosocomial Fever (fever acquired or related to hospitalisation). Drug (reaction / immuno-suppression, superinfection), Vascular access sites & foreign bodies, blood transfusion, thrombophlebitis ( inflammation of a vein caused by a blood clot) , pulmonary embolism
4. (a) Define what is shock. A state of generalised inadequate perfusion of all cells & tissues to meet cellular metabolic needs, resulting from acute circulatory failure. Often life threatening as blood is body's carrier of nutrient & oxygen to cells, deficiency of these essential inputs to life could lead to irreversible injury & death.  
(b) Name 3 major types of shock.
  - a. Hypovolemic (reduction of blood volume),
  - b. cardiogenic (failure of cardiac pump, fall in Cardiac Output),
  - c. septic (overwhelming bacteria infection),
  - d. anaphylactic (immune mechanism - release of histamine & other mediators resulting in peripheral vasodilation and fluid extravasation),
  - e. neurogenic (spinal cord injury, loss of autonomic & motor reflexes below injury level - peripheral vasodilatation & pooling of blood - hypotension)
5. Briefly outline the physical examination of respiratory system = 2010 (4)
6. The Following about **Hypertension** are True:
  - a. Stage 1 Hypertension is defined as Systolic Blood Pressure 140-159 or Diastolic Blood Pressure 90-99 mmHg (2marks) **True**
  - b. When systolic and diastolic pressures fall to different categories, the **higher** category should guide classification.(2marks) **True**
  - c. Non-pharmacological Therapy for hypertension includes making sure to drink no less than 1L of water a day. (2 marks) **false**
  - d. Diuretics can be used to treat Hypertension. (2marks) true - **hypo K**
  - e. Hypertension is a risk factor for Coronary Artery Disease.(2marks) **true**

2010

1. (a) What are the 4 stages of clubbing of fingers?
  1. floating sensation of nail bed
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  4. drumstick appearance

- (b) List 6 other stigmata of chronic liver disease.

1. vascular : spider angioma, scattered telangiectasia, purpura, ankle pigmentation
    2. hand : palmar erythema, dupuytren's contracture, flapping tremor, leukonychia, clubbing
    3. jaundice
    4. fetor hepaticus
    5. gynaecomastia / testicular atrophy
    6. ascites, fluid retention
    7. hepatic encephalopathy

2. (a) Name four symptoms or signs of meningitis. (4 marks)

Fever, Headache, Neck stiffness, photophobia, change in conscious level

- (b) Name three kinds of infective agents that can cause meningitis.

virus, bacteria, fungal (3 marks)

- (c) What are the treatments of choice for meningitis caused by those three kinds of infective agents?

virus - usually no treatment, sometimes antiviral e.g. acyclovir for varicella zoster.

bacteria - antibiotics.

fungus -anti-fungal.

3. In a patient with fever but no other specific symptoms, what aspects of the clinical history can assist doctors in making a diagnosis? Travel history (to epidemic area), Drug history (e.g. can causes / mask fever), Animal / Pet history (harbour diseases), Social / Sex history (potential of STD, AIDS), menstrual/ obstetric history (ovulation/ hormone changes can cause fever) living history (drug abuse), Family history (genetic diseases, malignancy),

4. Briefly outline the physical examination of respiratory system.

1. General inspection :

- peripheral clues : oxygen supplementation, sputum collection, chest drainage
- signs :

1. overall : cachexia, respiratory distress

2. face : central cyanosis

3. hand : finger clubbing, tobacco stain

4. neck : cervical lymph nodes (malignancy), elevated JVP due to IVC venous congestion

5. ankle edema

2. Chest inspection :

- size, shape / deformity - bilateral or unilateral (note : asymmetry, kyphosis, surgical scars, prominent veins)
- thoracotomy scar
- respiratory movement (use of accessory of muscle)
- Breathing rate & rhythm (brady/tachypnea/ hyperpnea) + pulse rate
- breathing pattern (breathlessness, wheezing, stridor), character of cough

3. Palpation :

- chest wall expansion
- tracheal deviation, mediastinal mass
- cardiac apex beat
- rib (local tenderness)

4. Percussion : abnormalities (dull / resonance)

- check lung-resonance,
- presence / absence of cardiac & hepatic dullness

5. Auscultation :

- breath sounds - bronchial / vesicular, prolonged expiration
- additional sounds : wheeze, crackles, rhonchi, pleural rub
- vocal resonance.

5. Q5. The following about **Atrial Fibrillation** is True : (10 marks) = 2012-5

(a) It is the most common cardiac arrhythmia in the elderly population. **True**

(b) Common causes are Hypertension, Ischemic Heart Disease and Thyrotoxicosis. **True + Mitral valve disease, pericarditis , cardiomyopathy, idiopathic**

(c) It has got no association with cerebrovascular accidents (stroke). **False. Associated with pro-thrombotic state, 5 fold increase risk of stroke.**

(d) Digoxin may be used in rate control of atrial fibrillation. **True.**

(e) Palpation of the radial artery shows regular fast pulse. **false. AF = completely irregular heart beat in both rate & volume**

2011

1. List 5 aspects of a patient's medical history that could help you establish the cause of a fever of unknown origin.
  - a. Travel history (to epidemic area),
  - b. Drug history (e.g. can causes / mask fever),
  - c. Animal / Pet history (harbour diseases),
  - d. Social / Sex history (potential of STD, AIDS),
  - e. menstrual/ obstetric history (ovulation/ hormone changes can cause fever)
  - f. living history (drug abuse),
  - g. Family history (genetic diseases, malignancy)
2. (a) Describe 5 signs in the hands of patients with liver diseases.  
**Palmar erythema, dupuytren's contracture, flapping tremor, leukonychia, clubbing**  
(b) Give 5 causes of clubbing of fingers.
  - a. Respiratory : COPD, bronchiectasis, bronchial carcinoma, pleural & mediastinal tumours,
  - b. Cardiovascular : Subacute Infective endocarditis, congenital heart diseases, aneurysms
  - c. Liver : liver cirrhosis, IBD inflammatory bowel diseases
  - d. Thyroid : thyroid acropachy ( Graves' disease)
3. The followings about **Heart Failure** are True: (10 marks, 2 for each)
  - (a) The common presentations are dyspnoea, ankle swelling, orthopnoea. **True + PND**
  - (b) Common signs are increased JVP, tachycardia, gallop rhythm and crepitations. **True + ankle oedema**
  - (c) Treatment involves encouragement of exercise. **False (should reduce cardiac work, rest)**
  - (d) Diuretics may be used to remove excessive sodium and water from the body. **True. + k supplements**
  - (e) Digoxin must NOT be used when the heart failure is complicated by atrial fibrillation. **False.**  
**Digoxin is positive inotropic (strengthen myocardial contraction) & negative chronotropic (decrease sympathetic activity, augment parasympathetic tone).** Beneficial for HF patients due to systolic dysfunction with AF that have rapid ventricular response.
4. (a) Define meningitis. (3 marks)  
**inflammation (swelling) of the protective membranes covering the brain and spinal cord**  
(b) Name 3 clinical features that can be seen in meningitis. (3 marks)  
**Fever, Headache, Neck stiffness, photophobia, change in conscious level**  
(c) List 2 causes of meningitis and the treatment for each of these causes. (4 marks)  
**pneumococcus - antibiotics, varicella zoster (shingles) - anti-viral e.g. Acyclovir**
5. (a) How many lobes are found in the right lung and the left lung anatomically? (4 marks)  
**right lung (3) - upper , middle, lower lobes. left lung (2) - upper, lower.**  
(b) List the major anatomical divisions of the right lung. (6 marks)
  - a. 2 fissures
  - b. oblique fissures : begins posteriorly at level of T3 passes antero-inferiorly to meet the inferior margin of lung close to 6th costal-chondral joint cartilage.
  - c. Upper, horizontal fissure, separates the upper from the middle lobe. Extends from anterior margin at 4th costal cartilage, runs horizontally backward to meet the oblique fissure at the mid axillary line.

2012

1. List 5 causes of fever other than infection.
  1. Non-infective inflammation (connective tissues / rheumatologic disease e.g. arthritis, SLE, Sjogren's diseases),
  2. malignancies (lymphomas, pancreas / kidney tumours),
  3. Vasculitis (seronegative)
  4. Acute Myocardial Infarction, Cerebral infarction/ haemorrhage (stroke),
  5. Post operation,
  6. Drug reaction,
  7. Thyrotoxicosis.
2. (a) What are the 4 stages clubbing of fingers? (4 marks)
  1. floating sensation of nail bed
  2. loss of angle between nail bed and nail fold.
  3. increase in convexity (longitudinal curvature) of nail.
  4. drumstick appearance

(b) List 6 conditions which can give rise to clubbing of fingers. (6 marks)

  - a. Respiratory : COPD, bronchiectasis, bronchial carcinoma, pleural & mediastinal tumours,
  - b. Cardiovascular : Subacute Infective endocarditis, congenital heart diseases, aneurysms
  - c. Liver : liver cirrhosis, IBD inflammatory bowel diseases
  - d. Thyroid : thyroid acropachy ( Graves' disease)
3. (a) Define meningitis. **inflammation (swelling) of the protective membranes covering the brain and spinal cord** (b) Name 3 clinical features that can be seen in meningitis. **Fever, Headache, Neck stiffness, photophobia, change in conscious level** (c) List 2 causes of meningitis and the treatment for each of these pneumococcus - antibiotics, varicella zoster (shingles) - anti-viral e.g. Acyclovir
4. (a) How many lobes are found in the right lung and the left lung anatomically? = 2011 (5)  
right lung (3) - upper , middle, lower lobes. left lung (2) - upper, lower.

(b) List the major anatomical divisions of the right lung.

  - a. 2 fissures
  - b. oblique fissures : begins posteriorly at level of T3 passes antero-inferiorly to meet the inferior margin of lung close to 6th costal-chondral joint cartilage.
  - c. Upper, horizontal fissure, separates the upper from the middle lobe. Extends from anterior margin at 4th costal cartilage, runs horizontally backward to meet the oblique fissure at the mid axillary line.
5. The following about **Atrial Fibrillation** is True: (10 marks)
  - (a) It is the most common cardiac arrhythmia in the elderly population. **True**
  - (b) Common causes are Hypertension, Ischemic Heart Disease and Thyrotoxicosis. **True + Mitral valve disease, pericarditis , cardiomyopathy, idiopathic**
  - (c) It has got no association with cerebrovascular accidents (stroke). **False. Associated with pro-thrombotic state, 5 fold increase risk of stroke.**
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