

**In the name of Allah
The most gracious, The most merciful**

PRE-EXAM PREPERATORY MANUAL ON
MEDICINE VIVA
With ECG and X-ray

DR. MD. MEHEDI HASAN LEMON

MBBS (Mymensingh Medical College, M-48) **BCS** (Health)

BCS (Health), **FCPS Part-1** (Medicine), **PGT** (Medicine)

CCD (BIRDEM), **DMU** (BITMIR)

Medical Officer, Ministry of Health and Family Welfare.

Ex- Medical Officer, BSMMU.

Ex-Honorary Medical Officer, Mymensingh Medical College Hospital, Mymensingh.

CONTENTS

Respiratory System	1-38
Introduction	2
Breathlessness	2
Cough	3
Hemoptysis	4
Respiratory failure	5
Pneumothorax	5
Pneumonia	8
Hospital Acquired Pneumonia	14
Bronchial Asthma	15
Chronic Obstructive Pulmonary Disease (COPD)	18
Tuberculosis (TB)	22
Bronchial Carcinoma	29
Bronchiectasis	32
Lung abscess	34
Pleural effusion	34
Pulmonary embolism	38
Gastroenterology	39-64
Introduction	40
Dyspepsia	40
Dysphagia	41
Gastro-Oesophageal Reflux Disease (GERD)	42
Vomiting	43
Upper GI bleeding	43
Lower GI bleeding	45
Diarrhoea	46
Constipation	48
Malabsorption	49
Abdominal pain	50
Upper abdominal pain	51
Peptic Ulcer Disease (PUD)	51
Carcinoma of stomach	54
Acute pancreatitis	55
Chronic pancreatitis	57
Irritable Bowel Syndrome (IBS)	58
Abdominal Tuberculosis	59
Inflammatory Bowel Disease (IBD)	60

Hepatology	65-98
Jaundice	66
Acute viral hepatitis	69
Chronic Liver Disease (CLD)	77
Cirrhosis of liver	77
Ascites	82
Spontaneous Bacterial Peritonitis (SBP)	86
Portal hypertension	87
Hepatic encephalopathy	89
Acute liver failure	91
Liver abscess	93
Hepatocellular carcinoma	96
Cardiology	99-142
Introduction	100
Chest pain	100
Coronary artery disease (CAD)	102
Acute Myocardial Infarction (AMI)	103
Angina	107
Heart failure	110
Cardiac arrhythmias	113
Sinus tachycardia and sinus bradycardia	113
Atrial fibrillation (AF)	114
Heart block	116
Supraventricular tachycardia (SVT)	119
Hypertension	120
Rheumatic fever	126
Mitral stenosis (MS)	128
Mitral regurgitation (MR)	130
Aortic stenosis (AS)	131
Aortic regurgitation (AR)	132
Infective endocarditis	133
Congenital heart diseases	136
Ventricular septal defect (VSD)	137
Tetralogy of fallot (TOF)	138
Cardiomyopathy	139
Acute pericarditis	139
Pericardial effusion	140
Chronic constrictive pericarditis	141
Cardiac tamponade	142
Nephrology and urology	143-162
Introduction	144
Urinary Tract Infection (UTI)	145
Acute pyelonephritis	148

Acute kidney injury (AKI)	149
Chronic kidney disease (CKD)	151
Nephrotic syndrome	156
Nephritic syndrome (AGN)	159
Clinical biochemistry and metabolic medicine	164-178
Introduction	164
Hyponatremia	164
Hypernatremia	166
Hypokalemia	167
Hyperkalemia	169
Hypocalcaemia	170
Hypercalcaemia	172
Hypomagnesaemia	172
Hypermagnesaemia	173
Acid-base balance	174
Metabolic acidosis	174
Metabolic alkalosis	176
Respiratory acidosis	177
Respiratory alkalosis	178
Haematology and transfusion medicine	179-204
Introduction	180
Anaemia	180
Iron deficiency anaemia (IDA)	180
Megaloblastic anaemia	182
Anaemia of chronic disease (ACD)	184
Aplastic anaemia	185
Acute leukaemia	187
Chronic myeloid leukaemia (CML)	189
Chronic lymphoblastic leukaemia (CLL)	191
Lymphoma	192
Haemophilia	194
Multiple myeloma	195
Idiopathic thrombocytopenic purpura (ITP)	197
Henoch–Schönlein Purpura (HSP)	198
Hereditary haemolytic anaemia	198
Miscellaneous	203
Neurology and stroke	205-248
Introduction	206
Bell’s palsy	209
Bulbar and pseudobulbar palsy	210
Status epilepticus	212
Epilepsy/seizure	213

Headache	218
Migraine	219
Tension-type headache	220
Guillain–Barré Syndrome (GBS)	221
Myasthenia gravis	223
Infections of nervous system	226
Meningitis	227
Viral encephalitis	231
Rabies	232
Shingles (Herpes Zoster)	232
Parkinson’s disease	233
Peripheral neuropathy	235
Spinal cord compression	236
Acute transverse myelitis (ATM)	237
Multiple sclerosis (MS)	238
Motor neuron disease (MND)	239
Stroke	240
Raised intracranial pressure (ICP) and ICSOL	245
Subarachnoid haemorrhage (SAH)	247
Coma or unconsciousness	248
Endocrinology and diabetes mellitus	249-272
Introduction	250
Hypothyroidism	250
Hyperthyroidism	252
Graves’ disease	254
Subacute (de quervain’s) thyroiditis	255
Cushing’s syndrome	257
Addison’s disease	259
Acromegaly	261
Diabetes mellitus	263
Hypoglycaemia	266
Diabetic ketoacidosis (DKA)	267
Hyperglycaemic hyperosmolar state (HHS)	269
Rheumatology	273-314
Introduction	273
Rheumatoid arthritis (RA)	274
Systemic lupus erythematosus (SLE)	282
Mixed connective tissue disease (MCTD)	286
Polymyositis and dermatomyositis	287
Spondyloarthropathies	288
Ankylosing spondylitis (AS)	288
Reactive arthritis	291
Psoriatic arthritis	293

Enteropathic spondyloarthritis	294
Gout	295
Osteoarthritis	300
Septic arthritis	304
Low back pain (LBP)	305
Osteoporosis	307
Systemic sclerosis	310
Psychiatry	315-326
Introduction	316
Mood disorder	316
Schizophrenia	318
Anxiety disorder	319
Obsessive-compulsive disorder (OCD)	321
Post-traumatic stress disorder (PTSD)	321
Somatoform disorder	321
Dissociative conversion disorder	322
Delirium and dementia	322
Alzheimer's disease	324
Eating disorders	325
Anorexia nervosa	325
Dermatology	327-336
Introduction	328
Scabies	328
Acne	328
Tinea	329
Pityriasis versicolor	330
Eczema or dermatitis	331
Psoriasis	332
Urticaria	333
Erythema Multiform/Steven's Johnson's Syndrome (SJS)	334
Miscellaneous	334
Infectious disease	337-368
Introduction	338
Fever	338
Typhoid (Enteric fever)	340
Malaria	342
Kala-azar	346
Leprosy	349
Dengue	252
Diarrhoea and vomiting	355
Food poisoning	357
Dysentery	357

Bacillary Dysentery (Shigellosis)	357
Chickenpox (Varicella)	358
Measles	359
Mumps	360
Filariasis	360
Sexually transmitted infections (STIs)	361
Gonorrhoea	361
Chlamydial infection	362
HIV AIDS	363
Syphilis	364
Miscellaneous	366
Ageing and disease	369-374
Poisoning	375-386
Introduction	376
Organophosphorus (OPC) poisoning	377
Benzodiazepines	380
Tricyclic antidepressants (TCAs)	380
Corrosive/chemical poisoning	381
Kerosene poisoning	382
Snake bite	383
Paracetamol poisoning	384
Stupefying Agent (Commuter Poisoning)	385
Environmental medicine	387-390
Introduction	388
Heat exhaustion	388
Heat stroke	388
Heat cramp	389
Drowning	389
Illness at high altitude	390
Clinical genetics	391-398
Introduction	392
Down syndrome	396
Klinefelter's syndrome	397
Turner's syndrome	397
Clinical immunology	399-402
Anaphylaxis	400
Nutritional factors in disease	403-408
Obesity	404
Vitamins	405

Electrocardiogram (ECG)	409-486
Physiology of conduction system of heart	410
Basics of ECG	412
ECG leads	415
Placement of leads	418
Normal ECG morphology	419
Normal ECG pattern	422
Systematic interpretation guideline for ECG	424
Standardization	424
Rate	424
Rhythm	425
Cardiac axis	425
P wave	427
PR interval	429
Q wave	430
R wave	431
S wave	432
QRS complex	432
ST segment	433
T wave	434
QT interval	435
U wave	435
Hypertrophy	435
Bundle branch block	437
Common ECGs	440
Sinus tachycardia	440
Sinus bradycardia	440
Sinus arrhythmia	440
Atrial fibrillation (AF)	440
Atrial flutter	441
Ventricular tachycardia (VT)	442
Supraventricular tachycardia (SVT)	444
Ventricular fibrillation	444
Torsades de pointes	445
First degree AV block	445
Second degree AV block	445
Third degree AV block	446
Hypokalemia	447
Hyperkalemia	447
Dextrocardia	448
Myocardial Infarction (MI)	449
Myocardial ischemia	454
Left ventricular hypertrophy (LVH)	455
Right ventricular hypertrophy (RVH)	457

Common ECG plates for practice	459-486
X ray	487-495

RESPIRATORY SYSTEM

Name some respiratory diseases that you have seen in ward?

1. Bronchial asthma
2. COPD
3. Pleural effusion
4. Pneumonia
5. Pulmonary TB
6. Pneumothorax
7. Bronchial carcinoma

Name some respiratory emergencies.

1. Tension pneumothorax
2. Acute severe asthma
3. Acute exacerbation of COPD

What are the common presentation respiratory diseases?

1. Cough
2. Breathlessness
3. Wheeze
4. Hemoptysis
5. Chest pain

BREATHLESSNESS

Define breathlessness/dyspnoea.

Breathlessness or dyspnoea can be defined as the feeling of an uncomfortable need to breathe.

[Davidson's-23rd -557]

What are the common causes of acute dyspnoea/breathlessness?

- A. **CVS:** Acute pulmonary oedema
- B. **Respiratory:**
 1. Acute severe asthma
 2. Acute exacerbation of COPD
 3. Pneumothorax
 4. Pneumonia
 5. Laryngeal oedema (e.g. anaphylaxis)
 6. Diabetic ketoacidosis
- C. **Others:** Psychogenic hyperventilation

[Davidson's-23rd -557]

PNEUMOTHORAX

A young male patient comes to ward with sudden severe respiratory distress with chest pain? What is your diagnosis?

Sir, I have DDs

- 1. Tension pneumothorax**
- 2. Acute LVF**

What are the definite signs of tension pneumothorax?

1. Diminished/absent breath sound
2. Hyper resonant percussion note

How will tension pneumothorax present?

1. Rapidly progressive breathlessness
2. Marked tachycardia
3. Hypotension
4. Cyanosis
5. Tracheal displacement to opposite side
6. Silent hemithorax

In which position tension pneumothorax patient come?

In sitting position

How will you treat tension pneumothorax?

1. O₂ inhalation
2. Insertion of a blunt cannula into 2nd intercostal space in midclavicular line
3. Chest drain insertion with water seal drainage

[Davidson's-23rd-626-627+ Other sources]

How intercostal drain is given?

- ✓ Inserted in the fourth, fifth or sixth intercostal space in the mid-axillary line
- ✓ Connected to an underwater seal or one-way Heimlich valve, and secured firmly to the chest wall.

[Davidson's-23rd-628]

How will you manage a patient with IT tube?

1. Observe if bubbling present or not
2. If bubbling ceased: Perform CXR PA view 24 hours later
3. If lung is fully expanded: Remove IT tube
4. If bubbling persist after 5-7 days: Thoracotomy
5. If bubbling had ceased before lung fully inflated: Check the tube for any obstruction, kinking or displacement.

When to remove the drain tube?

The morning after (e.g. 24 hours after) the lung has fully re-inflated and bubbling has stopped.

Indication for surgery: Continued bubbling after 5–7 days

GASTRO-OESOPHAGEAL REFLUX DISEASE (GERD)

A 45 years old obese female patient presented to you with the complaints of heart burn and excessive salivation precipitated by bending or lying. What is your Dx?

Gastro-oesophageal reflux disease (GERD)

What are the risk factors/ Causes of GERD?

1. Abnormalities of the lower oesophageal sphincter
2. Hiatus hernia
3. Delayed oesophageal clearance
4. **Gastric contents:** Gastric acid, pepsin and bile
5. Defective gastric emptying
6. Increased intra-abdominal pressure
7. **Dietary and environmental factors:** Dietary fat, chocolate, alcohol, tea and coffee etc.
8. Visceral sensitivity and patient vigilance

[Davidson's-23rd-791]

What are the common presentations of GERD?

1. **Heartburn and regurgitation:** Often provoked by bending, straining or lying down.
2. **Waterbrash** (Salivation due to reflex salivary gland stimulation as acid enters the gullet)
3. Choking
4. Odynophagia or dysphagia
5. Atypical chest pain
6. **Others:** Hoarseness ('acid laryngitis'), recurrent chest infections, chronic cough and asthma.

[Davidson's-23rd-791-92]

When will you need to investigate? What investigations will you do?

If patients present over 50–55 years, symptoms are atypical or complication is suspected.

1. **Endoscopy:** Investigation of choice.
2. **Twenty-four-hour pH monitoring** (pH<4)

[Davidson's-23rd-793]

ACUTE VIRAL HEPATITIS

A 20 years old man presented to you with the complaints of yellow colouration of and urine with anorexia, nausea and right upper abdominal discomfort. What is the most likely diagnosis?

Acute viral hepatitis

What are the common causes of viral hepatitis?

1. Hepatitis A
2. Hepatitis B with/without hepatitis D
3. Hepatitis C
4. Hepatitis E
5. **Less common:** Cytomegalovirus, Epstein–Barr virus

[Davidson-23rd-871]

What is the Pathogenesis of acute viral hepatitis?

- ✓ Virus is not directly cytotoxic to cells
- ✓ An immune response to viral antigens displayed on infected hepatocytes initiates liver injury.

[Davidson-23rd-871]

Which hepatotropic virus causes acute hepatitis?

1. Hepatitis A
2. Hepatitis B with/without hepatitis D
3. Hepatitis E

Which hepatotropic virus causes chronic hepatitis?

1. Hepatitis B with/without hepatitis D
2. Hepatitis C

What are the usual routes of transfusion?

1. Oro-faecal route: Hepatitis A & E
2. Parental route: Hepatitis B & C
3. **Which virus is more common to spread via IV drug abuse?**
4. HCV
5. **Which one is DNA virus?**
6. Hepatitis B

What are the common presentations of acute viral hepatitis?

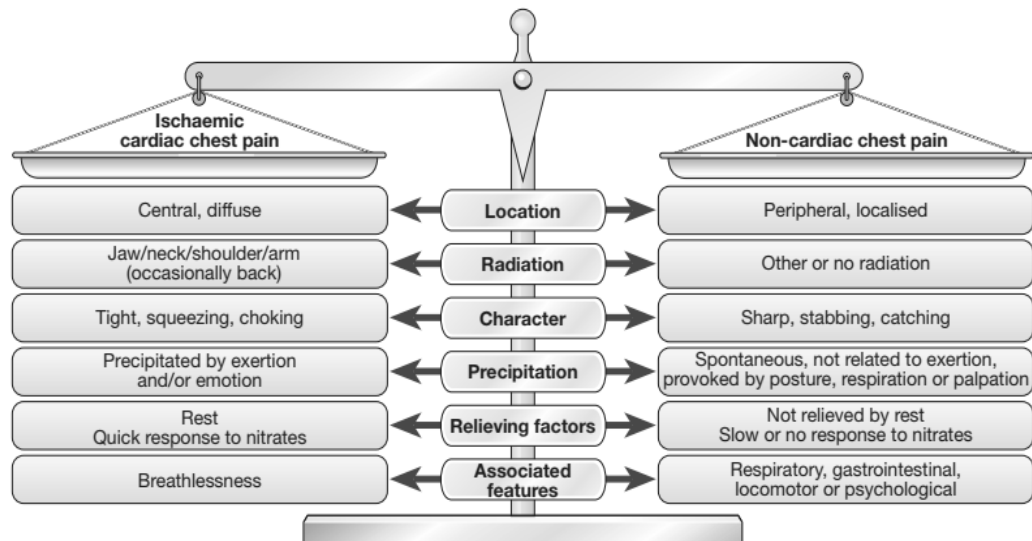
Symptoms:

1. Headache, Myalgia, Arthralgia
2. Nausea, Anorexia, Vomiting, Diarrhea, Abdominal discomfort
3. Dark urine and pale stools

Sign:

1. Jaundice
2. Tender hepatomegaly

How will differentiate ischemic cardiac chest pain and non-cardiac chest pain?



How will you differentiate between pain of MI and angina?

Pain of MI	Pain of angina
Sudden, more severe	Less severe
Duration long, usually >30 mins	Short, usually <10 mins
Not relieved by rest or nitrate	Relieved by rest or nitrate
Associated with <ul style="list-style-type: none"> ✓ Sweating ✓ Vomiting ✓ Cold clammy skin ✓ Hypotension 	Not so

What do you mean by Acute coronary syndrome (ACS)?

Is a term that encompasses both unstable angina and myocardial infarction.

What is Unstable angina (UA)?

New-onset or rapidly worsening angina (crescendo angina), angina on minimal exertion or angina at rest in the absence of myocardial damage.

What is Myocardial infarction (MI)?

When there is evidence of myocardial necrosis in a clinical setting consistent with acute myocardial ischaemia.

MI differs from unstable angina, since there is evidence of myocardial necrosis.

[Davidson's-23rd-493]

ACUTE MYOCARDIAL INFARCTION (AMI)

A 50 years old male came to you with sudden severe chest pain radiating to neck and vomiting. What is your diagnosis?

Acute myocardial infarction

What will you do then?

1. Firstly, I will give high flow oxygen
2. Then, will do an ECG

What findings do you expect on ECG?

ST elevation → Pathological Q wave → T inversion

How will you manage this case now?

1. Short history and examination: Pulse, BP, crepitation
2. Complete bed rest
3. High flow O₂
4. Tab. Aspirin 75 mg- 4 tablet after crushing
5. Tab. Clopidogrel 75mg- 4 tablet
6. Spray. Glycerin tinitrate 2 puffs sublingually
7. Anti-emetic
8. Statin: Atorvastatin
9. Anti ulcerant
10. Counseling the attendant and Refer the patient to CCU

What further Rx will be given in CCU?

1. Inj. Morphine (Cannot be given in bronchial asthma and COPD)
2. Inj. Metoclopramide
3. Inj. Streptokinase
4. Beta blocker
5. ACE inhibitor: Ramipril
6. Inj. Anoxaparin

What are the common presentations of acute MI?

1. Prolonged cardiac pain: Central chest pain radiating to neck, throat, arm, lasting >30 minutes
2. Breathlessness
3. Anxiety and fear of impending death
4. Nausea and vomiting
5. Collapse/syncope

[Davidson's-23rd-495]

HYPONATREMIA

A 25 years old man becomes unconscious after several episodes of vomiting (or passage of loose stool). What is the most likely underlying electrolyte imbalance for his unconsciousness?

Hyponatremia

What is the normal plasma sodium level?

135-145 mmol/L

Which electrolyte imbalance causes unconsciousness?

Sodium: Both hypo and hypernatremia

What are the common causes of hyponatremia?

1. Diarrhoea
2. Vomiting
3. Diuretics: e.g. frusemide

How will you classify hyponatremia according to duration of time?

1. Acute: <48 hours
2. Chronic: >48 hours

[Davidson's-23rd-358]

How will you classify hyponatremia according to severity?

1. Mild: 130–135 mmol/L
2. Moderate: 125–129 mmol/L
3. Severe: <124 mmol/L

[Davidson's-23rd-358]

What are the clinical features of hyponatremia?

1. Asymptomatic
2. Nausea
3. Vomiting
4. Delirium
5. Headache
6. Somnolence
7. Seizures
8. Coma
9. Cardiorespiratory arrest

[Davidson's-23rd-358]

How will you treat a case of hyponatremia?

- A. **If hyponatraemia has developed rapidly (<48 hours) and there are signs of cerebral oedema, such as obtundation or convulsions:** 3% sodium chloride: Initial bolus of 150 mL over 20 minutes
- B. **Chronic asymptomatic hyponatraemia:** Normal saline and sodium chloride tablet
- C. **Treatment of underlying cause**

What is maximum rate of correction of the plasma Na concentration in chronic asymptomatic hyponatraemia?

10 mmol/L/24 hours, and an even slower rate is generally safer.

[Davidson's-23rd-358]

ACUTE LEUKAEMIA

A 20 years old male was admitted to medicine ward with the complaints of fever and bruise. On examination, he has anaemia, bony tenderness and generalized lymphadenopathy. What is the likeliest Dx?

Acute leukaemia (Most probably ALL)

What is leukaemia?

Leukaemias are malignant disorders of the haematopoietic stem cell compartment, characteristically associated with increased numbers of white cells in the bone marrow and/or peripheral blood.

[Davidson's-23rd - 954]

What are the common risk factors of leukaemia?

- 1. **Ionising radiation:** Atomic bombing, radiotherapy, X-ray
- 2. Cytotoxic drugs
- 3. **Retroviruses:** e.g. HTLV-1, HIV, *H.pylori*
- 4. **Genetic:** e.g. Down's syndrome
- 5. Immune deficiency states (e.g. hypogammaglobulinaemia)

[Davidson's-23rd - 955]

What are the types of leukaemia?

- 1. Acute lymphoblastic leukaemia (ALL) [*Common in children*]
- 2. Acute myeloid leukaemia (AML) [*Common in adults*]
- 3. Chronic lymphocytic leukaemia (CLL)
- 4. Chronic myeloid leukaemia (CML)

[Davidson's-23rd - 955]

STATUS EPILEPTICUS

What do you mean by status epilepticus?

Status epilepticus is seizure activity not resolving spontaneously, or recurrent seizure with no recovery of consciousness in between.

[Davidson's-23rd-1080]

What are the common clinical presentations of status epilepticus?

1. Prolonged rigidity and/or clonic movements with loss of awareness: As seizure activity becomes prolonged, movements may become more subtle.
2. Cyanosis
3. Pyrexia
4. Acidosis
5. Sweating

[Davidson's-23rd-1080]

How will you manage this case?

1. **Ensure airway is patent; give oxygen**
2. **Check pulse, BP, BM stix and respiratory rate**
3. **Secure IV access**
4. **Send blood for:**
 - ✓ Glucose, urea and electrolytes, calcium and magnesium, liver function, antiepileptic drug levels
 - ✓ Full blood count and coagulation screen
 - ✓ Storing a sample for future analysis (e.g. drug misuse)
5. **If seizures continue for >5 mins: Diazepam 10 mg rectally or IV if necessary**
 - ✓ **Repeat *once only* after 15 mins**
6. **Correct any metabolic trigger:** e.g. Hypoglycaemia

[Davidson's-23rd-1081]

What are alternative to diazepam?

Lorazepam and midazolam

[Davidson's-23rd-1081]

What will you do further if not controlled?

1. **If seizures continue after 30 mins:** IV infusion of Phenytoin
2. **If seizures still continue after 30–60 mins:** Transfer to ICU
 - ✓ Intubation, ventilation and general anaesthesia using propofol or thiopental

[Davidson's-23rd-1081]

What are the complications of status epilepticus?

1. Aspiration
2. Hypotension
3. Cardiac arrhythmias
4. Renal failure
5. Hepatic failure

[Davidson's-23rd-1080]

RHEUMATOLOGY

What are the common rheumatological cases you have seen in ward?

1. Rheumatoid arthritis (RA)
2. Systemic Lupus Erythematosus (SLE)
3. Septic arthritis
4. Ankylosing spondylitis
5. Reactive arthritis

What is arthralgia and arthritis?

Arthralgia: Only pain in the joints

Arthritis: Pain + swelling in the joints

What is monoarthritis? What are the common causes of monoarthritis?

Pain and swelling affecting one joint or joint group.

Common causes:

1. Gout
2. Pseudogout
3. Septic arthritis
4. Tubercular arthritis
5. Trauma
6. Haemophila

What is oligoarthritis? What are the common causes?

Pain and swelling affecting 2-4 joints or joint groups.

Common causes:

1. Axial spondyloarthritis
2. Ankylosing spondylitis
3. Reactive arthritis
4. Psoriatic arthritis
5. Arthritis with inflammatory bowel disease (enteropathic, Spondyloarthritis).

What is polyarthritis? What are the common causes?

Pain and swelling affecting five or more joints or joint groups.

[Davidson's-23rd - 993]

Common causes:

1. RA
2. Viral arthritis
3. SLE
4. Osteoarthritis
5. JIA

Which arthritis are common in female?

1. RA
2. SLE

Which arthritis are more common in male?

1. Ankylosing spondylitis
2. Reactive arthritis
3. Gout

RHEUMATOID ARTHRITIS

A 38 years old lady presented with pain and swelling small joint of hands and feet with morning stiffness. What may the Dx?

RA

Any DD?

Yes, SLE

Sate the diagnostic criteria of RA. ***

Criterion	Score
Joints affected	
1 large joint	0
2–10 large joints	1
1–3 small joints	2
4–10 small joints	3
>10 joints (at least 1 small joint)	5
Serology	
Negative RF and ACPA	0
Low positive RF or ACPA	2
High positive RF or ACPA	3
Duration of symptoms	
<6 weeks	0
>6 weeks	1
Acute phase reactants	
Normal CRP and ESR	0
Abnormal CRP or ESR	1
Patients with a score ≥ 6 are considered to have definite RA	

[Davidson's-23rd-1023]

HEAT STROKE

A patient becomes unconscious during working at field in very hot humid day. What is your diagnosis and what how you manage it?

Heat stroke

What do you mean by heat stroke?

Heat injury (heat stroke) is an acute life-threatening situation occurs when the core body temperature rises above 40 °C.

What are the clinical features of heat stroke?

1. Headache, nausea, vomiting and weakness,
2. Neurological: Coarse muscle tremor, confusion, aggression or loss of consciousness
3. Skin: Very hot
4. Sweating: Absent

How will you treat heat stroke?

1. **Immediate cooling:** By evaporative or convective cooling
2. **IV fluid:**
 - ✓ Crystalloid (Avoid potassium containing fluid)
 - ✓ Dextrose: If hypoglycaemia present

[Davidson's-23rd-167-68]

VITAMIN

Name some fat soluble and water soluble?

Fat soluble: Vitamin A, D, E, K

Water soluble: Vitamin B & C

Name the sources of vitamin & diseases due to deficiency.

Name of vitamin	Sources	Disease due to deficiency
Vitamin A	Liver, milk, butter, cheese, fish oils	Xerophthalmia, night blindness, keratomalacia, follicular hyperkeratosis
Vitamin D	Sunlight	Rickets, osteomalacia
Vitamin E	Vegetables, seed oils	Haemolytic anaemia, ataxia
Vitamin K	Green vegetables, dairy products	Coagulation disorder
Vitamin B		
Thiamin (Vitamin B ₁)	Cereals, grains, bean, Meat, fish	Beriberi, Wernicke-Korsakoff syndrome
Riboflavin (Vitamin B ₂)		Glossitis, angular stomatitis and cheilosis
Niacin		Pellagra
Vitamin B₆ (Pyridoxine)		Polyneuropathy
Vitamin B₁₂ (Cobalamin)	Animal products	Megaloblastic Anaemia, neurological degeneration
Folate	Vegetables	Megaloblastic anaemia
Vitamin C (Ascorbic acid)	Fresh fruit and vegetables	Scurvy, delayed wound healing

FIRST-DEGREE ATRIOVENTRICULAR BLOCK

Criteria:

1. PR interval: Prolonged $>5\text{mm}$ ($>0.20\text{ sec}$)
2. Every P wave is followed by QRS complex
3. Rhythm: Normal
4. QRS complex: Normal

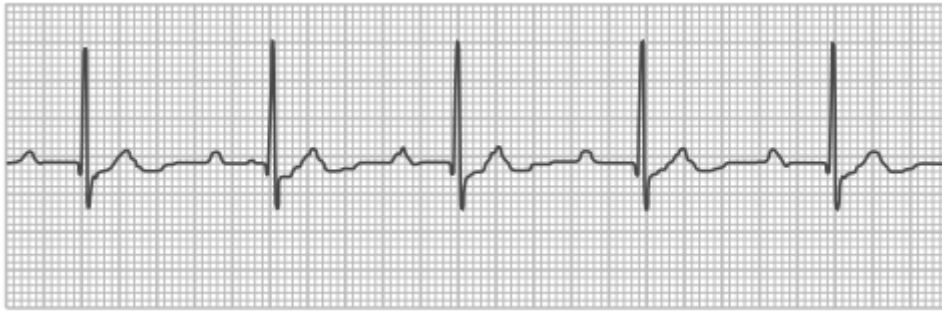


Figure: 1st degree AV block (PR interval is prolonged and measures 0.26 sec.)

THIRD-DEGREE ATRIOVENTRICULAR BLOCK

Criteria:

1. P wave is present, with a relatively regular sinus rate
2. QRS complex are present with a slow ventricular rate
3. PP regular, RR regular and variable PR interval
4. No relationship between P and Q



Figure: Complete heart block

NORMAL CHEST X RAY

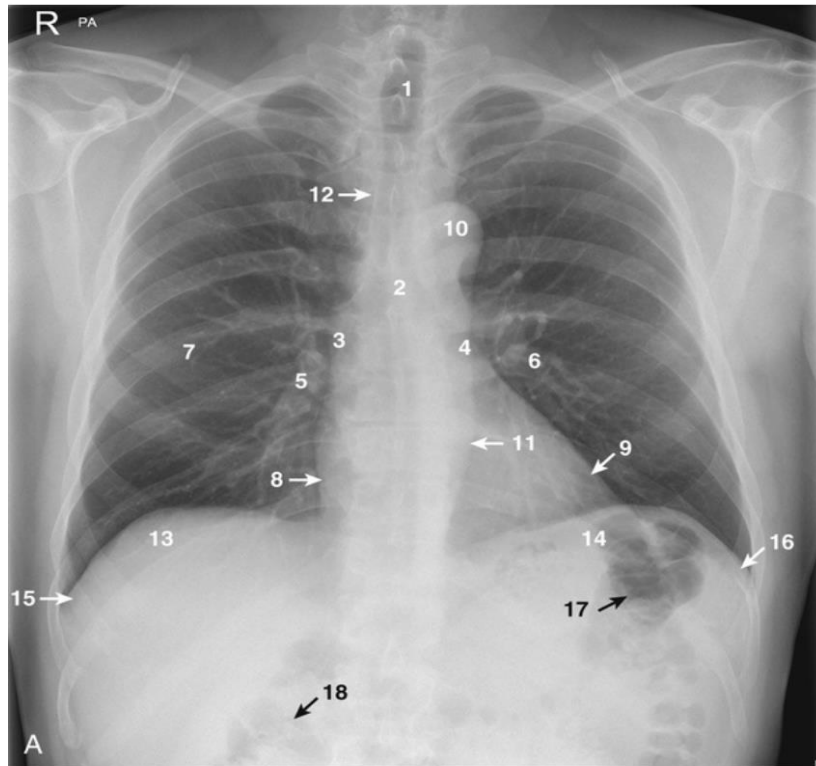


Figure: Normal chest X ray

1. Trachea
2. Carina
3. Right main bronchi
4. Left main bronchi
5. Right hilar structure
6. Left hilar structure
7. Right horizontal fissure
8. Right cardiac border formed by right atrium
9. Left cardiac border formed by left ventricle
10. Aortic knuckle
11. Descending thoracic aorta
12. Right paratracheal line
13. Right hemidiaphragm
14. Left hemidiaphragm
15. Right costophrenic angle
16. Left costophrenic angle
17. Gastric air bubble
18. Gas in colon