1. All are true regarding treatment of Guillain-Barre syndrome EXCEPT:

a) Corticosteroid used for early recovery and prevent long stay

b) High-dose intravenous immune globulin (IVIg) can be initiated

c) Plasmapheresis can be done

d) High-dose intravenous immune globulin (IVIg) and plasmapheresis are equally effective

Correct Answer - A
Corticosteroid used for early recovery and prevent long stay REF: Harrison's 17th ed chapter 380
In the vast majority of patients with GBS, treatment should be initiated as soon after diagnosis as possible. Each day counts; -2 weeks after the first motor symptoms, immunotherapy is no longer effective. Either high-dose intravenous immune globulin (IVIg) or plasmapheresis can be initiated, as they are equally effective. A combination of the two therapies is not significantly better than either alone.
Glucocorticoids have not been found to be effective in GBS.
Occasional patients with very mild forms of GBS, especially those who appear to have already reached a plateau when initially seen, may be managed conservatively without IVIg or PE.

2. Intravenous immunoglobulin therapy is effective in some patients with which of the conditions?

a) Pure red cell aplasia

b) Myelodysplasia

c) PNH

d) G6PD deficiency

Correct Answer - A

Red cell aplasia is treated with combination of erythrocyte transfusions and iron chelation. For persistent B19 parvovirus infection, almost all patients respond to intravenous immunoglobulin therapy.

Ref: Harrisons Principles of Internal Medicine, 18th Edition, Page 895

3. **Classic form of Alport syndrome is inherited as:**

a) X-linked

b) Autosomal recessive

c) Autosomal dominant

d) Sporadic

Correct Answer - A

Classic Alport syndrome is inherited as an X-linked disorder.

Reference:

Harrisons Principles of Internal Medicine, 18th Edition, Page 3213

4. **All of the following are examples of microdeletion syndromes, EXCEPT:**

a) Wilms' tumor–aniridia complex

b) Miller Dieker syndrome

c) Velocardiofacial syndrome

d) None of the above

Correct Answer - D

The term ***contiguous gene syndrome*** refers to genetic disorders that mimic a combination of single-gene disorders.
They result from the deletion of a small number of tightly clustered genes. Because some are too small to be detected cytogenetically, *they are termed microdeletions*.

The application of molecular techniques has led to the identification of at least 18 of these microdeletion syndromes.
Some of the more common ones include the **Wilms' tumor–aniridia complex (WAGR), Miller Dieker syndrome (MDS), and velocardiofacial (VCF) syndrome.**
WAGR is characterized by mental retardation and involvement of multiple organs, including kidney (Wilm's tumor), eye (aniridia), and the genitourinary system.

Ref: Harrison’s principle of internal medicine 17th edition, chapter 64.

5. **Osteogenesis imperfecta is a group of diseases characterized by genetic mutations which lead to?**

a) Shortened a1(I) collagen chains

b) Increased processing of procollagen chains

c) Decreased formation of hydroxylysine residues in collagen

d) Decreased synthesis of a2(I) collagen chains

Correct Answer - A

Collagen is a fibrous protein composed of 3 chains which form the collagen triple helix. Several different types of collagen exist which vary in the types and combinations of the 3 chains forming the collagen helix.
Each collagen chain is the product of separate genes.
For example, the type of collagen found in skin, arteries, bone, and tendons, Type I Collagen, is composed of 2 a1(I) chains and 1 a2(I) chain. Every third amino acid residue of all of the collagen chains is glycine.
This allows the chains to intertwine with glycine at the center. Osteogenesis imperfecta is a disease consisting of at least 4 clinically, genetically, and biochemically distinguishable disorders.

All are characterized by multiple bone fractures which result in bone deformities. Mutations leading to shortened a1(I) chains cause many of these variants. ***The short a1(I) chain associates with normal a1(I) chains and a2(I) chains which prevents normal helix formation. Defective molecules are degraded leading to weakened collagen structures.***

Other forms of osteogenesis imperfecta are due to mutations in which glycine residues are changed to other amino acids. This leads to destabilization of the collagen helix because of the larger amino acid forced to the center of the helix structure. A decrease in hydroxyproline occurs in scurvy. This occurs because ascorbic acid (vitamin C) is necessary to form the hydroxyproline.

With decreased amounts of hydroxyproline in the collagen molecule, the helix is less stable. The result is deficient growth and poor wound healing in the individual with scurvy. The disease Ehlers-Danlos VI is characterized by a decrease in the enzyme lysyl hydroxylase, the enzyme responsible for the formation of hydroxylysine. The decrease in hydroxylysine in collagen results in less stable cross-linking of the collagen molecules.

Ref: Prockop D.J., Bateman J.F. (2012). Chapter 363. Heritable Disorders of Connective Tissue. In D.L. Longo, A.S. Fauci, D.L. Kasper, S.L. Hauser, J.L. Jameson, J. Loscalzo (Eds), *Harrison's Principles of Internal Medicine*, 18e.

6. **The most common cause of euvolemic hyponatremia is which of the following?**

a) Hypothyroidism

b) Hypoadrenalism

c) Hyperthyroidism

d) SIADH

Correct Answer - D

The syndrome of inappropriate antidiuresis is the most common cause of euvolemic hyponatremia.

Reference:

- Harrisons Principles of Internal Medicine, 18th Edition, Page 345

7. **Richter’s syndrome refers to which of the following malignant transformation?**

a) CLL evolving into aggressive lymphoma

b) Hairy cell leukemia evolving to AML

c) Blast crisis in CML

d) Splenic infiltration in NHL

Correct Answer - A

Richter's transformation or Richter's syndrome is a complication of B cell chronic lymphocytic leukemia (CLL) or hairy cell leukemia (HCL) in which the leukemia changes into a fast-growing diffuse large B cell lymphoma.

8. **Evans’s syndrome refers to which of the follwoing?**

a) Autoimmune hemolytic anemia with autoimmune neutropenia

b) Autoimmune hemolytic anemia with autoimmune thrombocytopenia

c) Autoimmune hemolytic anemia with marked bone marrow suppression

d) Autoimmune hemolytic anemia with hypersplenism

Correct Answer - B

Ans. B. Autoimmune hemolytic anemia with autoimmune thrombocytopenia

- In some cases, Autoimmune hemolytic anemia (AIHA) can be associated with autoimmune thrombocytopenia (Evans's syndrome).

Reference:

- Harrisons Principles of Internal Medicine, 18th Edition, Page 881

9. **All of the statements are true about Brugada syndrome, EXCEPT:**

a) Transient ST segment elevation in lead V1-V3 is seen

b) Responsible for the sudden and unexpected nocturnal death syndrome

c) Risk of fatal ventricular arrhythmia is more

d) Flecainide can be used to treat

Correct Answer - D

The major clinical features of Brugada syndrome include, transient, or concealed ST segment elevation in V1 to V3 that typically can be provoked with the sodium channel-blocking drugs flecainide, and procainamide and a risk of polymorphic ventricular arrhythmias.

Ref: Harrisons Principles of Internal Medicine, 18th Edition, Page 1898.

10. **All of the following heart sounds occur shortly after S2, EXCEPT:**

a) Opening snap

b) Pericardial knock

c) Ejection click

d) Tumor plop

Correct Answer - C

Pericardial knock, Opening snap, and Tumor plop occurs shortly after S2. *Ejection click occurs after S1.*

11. **Ewart's sign is seen in:**

a) Acute pulmonary embolism

b) Pericardial effusion

c) Pneumomediastinum

d) Chronic constrictive pericarditis

Correct Answer - B

In **pericardial effusion** the base of the left lung may be compressed by pericardial fluid, producing a patch of dullness and increased fremitus (and egophony) beneath the angle of the left scapula. This is **Ewart's sign.**

Ref: Harrisons principles of internal medicine, 18th edition, Page: 1971.

12. **All are cause of transudative pleural effusion, EXCEPT:**

a) Cirrhosis

b) Nephrotic syndrome

c) Congestive heart failure

d) Bronchogenic carcinoma

Correct Answer - D

Bronchogenic carcinoma causes exudative effusion. Cirrhosis, Nephrotic syndrome and Congestive heart failure cause transudative effusion. Pulmonary thrombo embolism can cause both exudative and transudative pleural effusion.

Ref: Harrisons principles of internal medicine, 18th edition, Page: 2180

13. **The gold standard test to diagnose PNH is:**

a) Bone marrow study

b) Sucrose hemolysis test

c) Flow cytometry

d) Genetic study

Correct Answer - C

The gold standard test to diagnose PNH today is flow cytometry.

Reference:

Harrisons Principles of Internal Medicine, 18th Edition, Page 884

14. Which of the following is the most common cause of acute pyelonephritis in patients without Urological abnormalities or urinary calculi?

a) Pseudomonas aeruginosa

b) Proteus mirabilis

c) Escherichia coli

d) Serratia marcescens

Correct Answer - C

In general, gram-negative organisms are the most common causes of acute urinary tract infections in patients who do not have complicating abnormalities of the urinary tract, such as obstruction from calculi or other causes. **Among the gram-negative organisms, Escherichia coli is the bacterium that is most frequently isolated from urine cultures in these patients**. Different species of Pseudomonas, Proteus, Serratia, and Klebsiella may also be responsible for so-called uncomplicated urinary tract infections, including acute pyelonephritis, but are less commonly implicated than Escherichia coli.

Ref: Lerma E.V. (2009). Chapter 37. Chronic Tubulointerstitial Nephritis. In E.V. Lerma, J.S. Berns, A.R. Nissenson (Eds), *CURRENT Diagnosis & Treatment: Nephrology & Hypertension.*

15. **Pigment gallstones usually not seen in:**

a) Gilbert's syndrome

b) Alcoholic cirrhosis

c) Cystic fibrosis

d) Clofibrate therapy

Correct Answer - D

Clofibrate therapy: Increased biliary secretion of cholesterol, leads to cholesterol gallstones. Pigment stones are more common in patients who have chronic hemolytic states), liver cirrhosis, Gilbert's syndrome, or cystic fibrosis.

Reference:

Harrisons Principles of Internal Medicine, 18th Edition, Page 2618

16. **The TRUE statement about Dieulafoy's lesion is:**

a) The most common location is in the greater curvature of stomach

b) It causes venous bleeding

c) Often recognized only after repeated endoscopy for recurrent bleeding

d) Thermal coagulation is not effective

Correct Answer - C

Dieulafoy's lesion:

- This lesion is a large-caliber arteriole that runs immediately beneath the gastrointestinal mucosa and bleeds through a pinpoint mucosal erosion.
- It is seen most commonly on the lesser curvature of the proximal stomach, causes impressive arterial hemorrhage, and may be difficult to diagnose.
- It is often recognized only after repeated endoscopy for recurrent bleeding.
- Endoscopic therapy, such as thermal coagulation, is typically effective for control of bleeding.

Ref: Harrison, Edition-18, Page-2415.

17. To distinguish between primary bacterial peritonitis from secondary peritonitis the following biochemical parameters in ascitic fluid has been used, EXCEPT:

a) Total protein > 1 g/dl

b) LDH greater than the upper limit of the normal of the serum

c) Glucose < 50 mg/dl

d) PMN count < 250 cells/mm3

Correct Answer - D

Secondary bacterial peritonitis is the ascitic fluid infection caused by a surgically treatable intraabdominal source of infection. It can be divided into two groups

1. Those with free perforation of a viscus eg : duodenal ulcer perforation
2. Those with loculated abscess eg : perinephric abscess

The characteristic ascitic fluid findings in the setting of secondary bacterial peritonitis are

Ascitic fluid PMN > 250 cells/mm 3

with at least two of the following criteria

1. Ascitic fluid total protein > 1 g/dl
2. LDH greater than the upper limit of the normal of the serum
3. Glucose < 50 mg/dl

If Ascitic fluid carcinoembryonic antigen **(CEA) is > 5 ng/mL** and alkaline phosphatase **> 240 U/L** indicates gut perforation.

Ref: AASLD practice guidelines: Hepatology, Vol.49, No.6 , 2009.

18. **All are the pharmacologic therapeutic options for achalasia, EXCEPT:**

a) Nitrates

b) Beta blockers

c) Botulinum toxin

d) Sildenafil

Correct Answer - B

Pharmacologicals therapies are usually ineffective. They can be used as a temporary measures.

The agents used are:
1. Nitrates
2. Calcium channel blockers
3. Botulinum toxin
4. Sildenafil- **phosphodiesterase inhibitors, effectively decrease LES pressure.**

Botulinum toxin, injected into the LES under endoscopic guidance, inhibits acetylcholine release from nerve endings and improves dysphagia in about 66% of cases for at least 6 months

Ref: Harrison, Edition-18, Page-2432

19. **Massive splenomegaly is seen in all of the following conditions, Except:**

a) Hairy cell leukemia

b) Myelofibrosis

c) CML

d) Hepatic vein obstruction

Correct Answer - D

Hepatic vein obstruction is associated with splenomegaly but not massive splenomegaly.

Causes of massive splenomegaly:

- Chronic myeloid leukemia
- Lymphomas
- Hairy cell leukemia
- Myelofibrosis with myeloid
- Metaplasia
- Polycythemia vera
- Gaucher's disease
- Chronic lymphocytic leukemia
- Sarcoidosis
- Autoimmune hemolytic anemia
- Diffuse splenic hemangiomatosis

Ref: Henry P.H., Longo D.L. (2012). Chapter 59. Enlargement of Lymph Nodes and Spleen. In D.L. Longo, A.S. Fauci, D.L. Kasper, S.L. Hauser, J.L. Jameson, J. Loscalzo (Eds), Harrison's Principles of Internal Medicine, 18e.

20. **A patient with cushingoid features presents with hemoptysis, he shows no response to dexamethasone suppression test. The most likely diagnosis is:**

a) Adrenal hyperplasia

b) Adrenal adenoma

c) Ca lung with ectopic ACTH production

d) Pituitary microadenoma

Correct Answer - C
Ca lung with ectopic ACTH production

21. **All of the following factors stimulate GH secretion, EXCEPT:**

a) Hypoglycemia

b) Exercise

c) Hyperglycemia

d) Stress

Correct Answer - C

Hyperglycemia is known to inhibit growth hormone secretion. Other factors which reduce growth hormone secretion are:

- REM sleep
- Cortisol
- FFA
- Medroxyprogesterone
- Growth hormone and IGF-I

Factors which stimulate GH secretion are:

- Hypoglycemia
- 2-Deoxyglucose
- Exercise
- Fasting
- Increase in circulating levels of certain amino acids
- Protein meal
- Infusion of arginine and some other amino acids
- Glucagon
- Stressful stimuli

Ref: Barrett K.E., Barman S.M., Boitano S., Brooks H.L. (2012). Chapter 18. The Pituitary Gland. In K.E. Barrett, S.M. Barman, S. Boitano, H.L. Brooks (Eds),Ganong's Review of Medical Physiology, 24e.

22. **Which is the earliest feature of multiple sclerosis ?**

a) Internuclear opthalmoplegia

b) Optic neuritis

c) Cerebellar ataxia

d) Diplopia

Correct Answer - B

Sudden onset of optic or retrobulbar optic neuritis without any associated CNS involvement can be interpreted as the first sign or only sign of multiple sclerosis provided other causes of optic neuritis are excluded.

Reference:

Current Medical Diagnosis and Treatment By Panda 3rd edition page 537.

23. **All are recognised features of Tourette's syndrome, EXCEPT:**

a) Motor Tics

b) Ataxia

c) Coprolalia

d) Predominantly affects males

Correct Answer - B

Tourette's syndrome is a neurobehavioral disorder named after the French neurologist Georges Gilles de la Tourette. It predominantly affects males. TS is characterized by multiple motor tics often accompanied by vocalizations. Associated behavioral disturbances include anxiety, depression, attention deficit hyperactivity disorder, and obsessive-compulsive disorder.

Ref: Harrisons Principles of Internal Medicine, 18th Edition, Page 3332

24. **Recurrent facial nerve palsy is a feature of:**

a) Melkersson Rosenthal syndrome

b) Simpson Golabi syndrome

c) Down’s syndrome

d) Klinefelter’s syndrome

Correct Answer - A

The rare *Melkersson-Rosenthal syndrome* consists of recurrent facial paralysis; recurrent—and eventually permanent—facial (particularly labial) edema; and, less constantly, plication of the tongue. Its cause is unknown

Ref: Harrison’s principle of internal medicine 17th edition, chapter 371.

25. **Non-noxious stimulus is perceived as pain in:**

a) Allodynia

b) Hyperalgesia

c) Paraesthesia

d) Hyperpathia

Correct Answer - A

Allodynia refers to production of pain by non noxious stimuli. Its a phenomenon characterised by painful sensations provoked by non-noxious stimuli, (e.g. touch), transmitted by fast- conducting nerve fibres. **Hyperalgesia** is a exaggerated pain response produced to a noxious stimuli. **Hyperpathia** is a painful syndrome characterized by an abnormally painful reaction to a stimulus, as well as an increased threshold. **Paresthesias** are abnormal sensations of pins and needles or tingling caused by normally non noxious events.

Mechanism: changes of the response characteristics of second - order spinal neurons so that normally inactive or weak synaptic contact mediating non-noxius stimuli acquire the capability to activate a neuron that normally responds only to impulses signaling pain.

Ref: Harrison’s, Principles of internal medicine, 17th Edition, Page 54, 2581

26. **Systemic Inflammatory Response Syndrome (SIRS) includes all of the following, EXCEPT:**

a) Leucocytosis

b) Hyperthermia

c) Hypothermia

d) Thrombocytopenia

Correct Answer - D

Fever or hypothermia, leukocytosis or leukopenia, tachypnea (>20/minute), and tachycardia (>90/min) are the cardinal signs of systemic inflammatory response syndrome (SIRS).
Ref: Harrison's Internal Medicine, 18th Edition, Chapter 271; Clinical Review of Surgery - ABSITE Preparation, 2nd Edition, Pages 286-7

27. The genetic variation in drug metabolism pathway that results in severe toxicity of fluorouracil is:

a) CYP2C9

b) Dihydropyrimidine dehydrogenase

c) Thiopurine-S methyltransferase

d) CYP2D6

Correct Answer - B

Genetic variation in drug metabolism pathway dihydropyrimidine dehydrogenase results in severe toxicity of **capecitabine, fluorouracil.**

Dihydropyrimidine dehyilrogenase (DPD) is the initial and rate-limiting enzyme in the catabolism of S-fluorouracil (S-FU).

Thus, patients with a DPD deficiency are at rkk of dewloping severe S-FU-associated toxicity.

Ref: Harrison, Edition-18, Page-42.

28. The feature of JVP in cardiac tamponade is:

a) Prominent x descent with prominent 'y'descent

b) Prominent x descent with absent 'y' descent

c) Absent x descent with prominent 'y' descent

d) Absent x descent with absent 'y' descent

Correct Answer - B
B i.e. Prominent X descent with absent 'Y' descent

29. Pulsus paradoxus is seen in (select correct option)

a) Cardiac tamponade

b) Constrictive pericarditis

c) HOCM

d) a and b both

Correct Answer - D
Answer *is* A (Cardiac tamponade); B (Constrictive pericarditis)
Pulsus paradoxus ***is characteristic of cardiac tamponade but also seen in constrictive pericarditis and acute asthma*** Pulsus alternns.

30. C wave in JVP indicates:

a) Atrial contraction

b) Bulging of tricuspid valve

c) Ventricle systole

d) Rapid ventricular filling

Correct Answer - B
Answer is B (Bulging of Tricuspid valve)
The 'c' wave in JVP is a positive wave produced by the bulging of the tricuspid valve into the right atrium during right ventricular isovolumetric systole and by the impact of the carotid artery adjacent to the jugular vein.

31. Mid-diastolic Murmur with presystolic accentuation is typically seen in:

a) Mitral stenosis

b) Mitral Regurgitation

c) Aortic stenosis

d) MVP

Correct Answer - A
Answer is A (Mitral Stenosis)
Mid diastolic murmur with with presystolic accentuation is typically seen in mitral stenosis.
Mitral stenosis is associated with a low-pitched rumbling diastolic murmur heard best at the apex. The murmur typically peaks during mid-diastole and again immediately before the first heart sound (Pre-systolic accentuation)'
- Evidence Based physical diagnosis (Elsevier) 2012/397
Mitral stenosis is associated with a low-pitched rumbling diastolic murmur heard best at the apex with the patient in lateral decubitus position. In patients with sinus rhythm, the murmur often reappears or becomes louder during atrial systole (presystolic accentuation)' - Harrison

32. Which of the following murmurs increase with Valsalva maneuver?

a) MR

b) VSD

c) AS

d) HOCM

Correct Answer - D
Answer is D (HOCM)
Murmurs of HOCM are increased on Valsalva maneuver
Murmurs of VSD, MR and AS all decrease in intensity on Valsalva maneuver
Differentiation of systolic murmurs base don changes in their intensity from physiologic maneuvers

Maneuver	HOCM	AS	MR/VSD	MVP	TR	Flow
Valsalva's maneuver		•1,	.1,	1‘	.1,	.1,
Stand	1‘	-	-	is	-	.1,
Squat	,I,	-	-	.1,		1'
Handgrip/TAO	J.	-	1'	1'	-	
Inspiration		-	-	-	1'	- ori‘
Post-PVC	T	T	-			T

AS= aortic stenosis; Flow = benign flow murmur; HOCM = hypertrophic obstructive cardiomyopathy; MR = mitral regurgitation; MVP = mitral valve prolapse; PVC = pressure ventricular contraction; TAO = transient arterial occlusion; TR = tricuspid regurgitation; VSD = ventriocular septal defect; 1'= increased in murmur intensity; .1, = decreased in murmur intensity; - = no predictable change

predictable change

33. Congenital long QT syndrome can lead to?

a) Complete heart block

b) Polymorphic ventricular tachycardia

c) Acute myocardial infarction

d) Recurrent supraventricular tachycardia

Correct Answer - B
Answer is B (polymorphic Ventricular Tachycardia)
Long QT syndrome in children:

- Congenital long QT Syndrome is a familial disorder characterized by a prolonged QT interval on Electrocardiogram Most forms of congenital long QT Syndromes are caused by Channelopathies created by mutations in one or more genes

Etiology:
Congenital

- Jarvell and Lange Nielson Syndrome
- Romano Ward syndrome

Acquired:

- Class IA and III antiarrhythmics
- Macrolide antibiotics
- Pentamidine
- Antimalarials
- Antipsychotics
- Arsenic trioxide

Characteristics:

- *Torsades de pointes is the hallmark arrythymia in the long QT syndrome*

- *Pylomorphic ventricular tachycardia is synonymous with Torsades de Pointes .*
- *Congenital long QT Syndrome is associated with reduced repolarization reserve.*
- *Reduced repolorization reserve:Reduced repolorization reserve predisposes patients with marked QT prolongation to develop Torsades de pointes.*

Symptoms:

- May present with syncope due to torsades de pointesQ
- May present with sudden death due to ventricular.fibrillationQ

Note

Ventricular Tachyarrythmias commonly develop during periods of adrenergic stimulation such as fright or exertion but may also develop during sleep.

Most competitive sports are contraindicated for patients with congenital long QT syndrome

Clinical conditions that are associated with reduced repolarization reserve

(Patient predisposed for marked QT prolongation and resultant Torsades-de pointes)

- Congenital long QT Syndrome
- Acquired long QT Syndrome caused by a variety of drugs/ medications
- Bradvcardia
- Female gender
- Ventricular Hypertrophy
- Electrolyte disturbances such as hypokalemia and hypomognesemia

34. ECG features of Athlete's Heart include all of the following except:

a) High QRS Voltage

b) Early repolarization

c) Tall peaked T waves

d) Shortened QT Interval

Correct Answer - D
Answer *is* D (Shortened QTc Interval)
Athletes Heart is associated with a prolonged QT Interval and not a shortened QT interval.
Athlete's heart is usually associated with a prolonged QT interval because of bradycardia. When corrected for heart rate the QT Interval (QT c) is usually at the upper limit.
Common ECG findings in Athletic Heart syndrome

- Sinus bradycardia
- Sinus arrhythmia
- First-degree AV block
- Second Degree Heart Block (Mobitz 1; Wenckebach AV block)
- Incomplete RBBB
- Notched p waves (increase in amplitude and duration)
- RVH by voltage criteria (High QRS Voltage)
- LVH by voltage criteria (High QRS Voltage)
- Early repolarization changes
- Prolonged QT Interval (Due to bradycardia)
- *QTc interval at upper limit (QTc is QT Interval corrected for Heart Rate)*
- *Tall, Peaked T waves*
- Prominent U Waves

35. Which of the following ECG changes in an Asymptomatic Athlete's Heart should be considered pathological'?

a) Increased amplitude of QRS

b) Second Degree (Mobitz 2) heart block

c) Prominent U Waves

d) T Wave inversion

Correct Answer - B
Answer is B (Second Degree (Mobitz 2) heart block)
Second Degree (Mobitz 2) heart block should he considered a pathological finding in an Athletes Electrocardiogram.
`Various degrees of atrioventricular blocks have been described in endurance athletes. First Degree Blocks and Second Degree (Mobitz Type- 1) are a common finding. However second degree (Mobitz type -2) and third degree blocks are pretty rare and should be considered pathological'
The athletic heart syndrome
- Sports Cardiology: From Diagnosis to Clinical Management (Springer) 2012/ 18, 19
Benign findings
Physical exam
• Grades 1 and 2 systolic ejection murmurs
• Split S2
• S3 or S4
ECG changes
• Sinus arrhythmia

• Sinus bradycardia
• *First-degree heart block*
• *Second-degree heart block (Mobitz 1)*
• Junctional escape beats
• Voltage criteria for hypertrophy (High QRS Voltage)
• Early repolarization
• Incomplete right bundle branch block
• P wave increases in amplitude and duration
• Tall peaked T Waves
• T-wave flattening for inversion that normalizes with exercise
• Prominent U waves

Pathologic findings

Physical exam

• Systolic murmurs at the lower sternal border augmented by Valsalva and decreased with squatting
• Diastolic murmurs

ECG changes

• Down-sloping ST-segment depression
• ST elevation with broad T waves
• Significant Q waves (anterior or inferior pattern)
• Delta waves (Wolff-Parkinson-white)
• *Second-degree heart block (Mobitz 2)*
• *Third-degree heart block*

- *Prolonged QTC interval*
- LVH with ST-T wave strain pattern

These findings assume an asymptomatic athlete. If an athlete is symptomatic or a possible pat o og c n ng tsfoun further workup is indicated.

36. All the following are features of right sided heart failure, Except:

a) Increased PCWP

b) Pulsatile liver

c) Increased JVP

d) Positive hepatojugular reflex

Correct Answer - A

Answer is A (Increased PCWP)

Elevated Pulmonary capillary wedge pressure (1 PCWP) is a feature of left sided heart failure and not right sided heart failure.

Failure of Right ventricle results in systemic congestion, and not pulmonary congestion and hence PCWP is not raised unless Right heart, failure is caused:secondary to Left sided failure.

Left heart failure

- Left heart failure is defined as a clinical syndrome where the dominant feature is fluid congestion in the lungs (pulmonary) rather than in the systemic circulation
- The pulmonary capillary wedge pressure is typically elevated (1-PCWP)
- Predominant symptoms are related to passive congestion of lungs and pulmonary edema
- Dyspnea
- Orthopnea
- Paroxysmal Nocturnal Dyspnea (PND)
- Cough with Pink Frothy Sputum
- Rales / Crackles

Right heart failure

- Right heart failure is defined as a clinical syndrome where the dominant feature is fluid congestion in the systemic circulation.
- The pulmonary capillary wedge pressure is normal (Normal PCWP) unless Right heart failure is caused secondary to left sided heart failure (Ted PCWP) *(PCWP is not elevated in isolated Right heart failure)*
- Predominant symptoms are related to passive systemic congestion
- Peripheral Edema
- Ascitis
- Congestive hepatomegaly (may be pulsatile)
- Congestive splenomegaly
- Weight gain
- Nocturia
- Raised JVP
- Positive Hepatojugular reflex

37. Severity of Mitral Regurgitation may be judged by

a) Intensity of murmur

b) Duration of murmur

c) Left ventricular S_3

d) Loud S_1

Correct Answer - C

Answer is C (Left Ventricular S_3)

The severity of Mitral Regurgitation may be judged clinically by the presence of left ventricular dilatation and the presence of third heart sound (Left Ventricular $SJ_?$. These features indicate a more severe disease

'A third heart sound (S_3) in chronic mitral regurgitation is usually indicative of severe regurgitation'

Severity of Mitral Regurgitation:

.. . If the murmur is harsher and has a lot of low and medium frequencies. It usually indicates a lot of flow and therefore will imply significant regurgitation. A harsh decrescendo mitral regurgitation murmur is usually indicative of severe regurgitation because the decrscendo effect is caused by early buildup of a very high v wave pressure in the left atrium resulting from a severe degree of regurgitation. Thus decreasing the gradient in late systole (If the murmur, on the other hand, is all pure high frequency and confined only to late systole. Then it must indicate a high pressure difference between the left ventricle and the left atrium and therefore only mild regurgitation).

2. When the mitral regurgitation is severe, the volume overload on the

left ventricle will be high, resulting in an enlarged left ventricle. This may be reflected in a displaced hyperdynamic wide –area left ventricular apical impulse. In addition, the hyperdynamic left ventricle will have rapid ejection. This will make the A2 occur early. Resulting in a wide-split S2. Thus, a wide –split S2 in the presence of mitral regurgitation is a sign of severe regurgitation if the wide split is not caused by P2 delay.

3. In addition, severe regurgitation because of the volume load effect will have a torrential inflow through the mitral valve during diastole. This will set up the necessary conditions for the production of an S3 or a mid –diastolic inflow rumble. The presence of an S3 or an inflow rumble at the apex will, therefore, be a sign of significant mitral regurgitation as well.

Severity of Mitral Regurgitation : Features indicating increased severity:

- *Presence of Left ventricular S3 or an inflow rumble at the apex*
- *Harsh Decrescendo murmur with lot of low and medium frequencies*
- *Wide split S, due to early A2 (not caused by P2 delay) in presence of MR*

Note :

Loudness and duration of Mitral regurgitation murmur does not always correlate with the severity of the regurgitation

38. A 50-year-old asymptomatic man with established aortic stenosis undergoes Exercise Stress testing according to Bruce Protocol. The stress test was terminated at 11 minutes due to development of fatigue and dyspnea. Regional pressure gradient was observed to be 60 mm Hg between the two sides of the aortic valve. What is the best management.

a) Angiogram

b) Aortic valve replacement

c) Aortic Balooning

d) All

Correct Answer - B

Answer *is* B (Aortic valve replacement)

The patient in question has asymptomatic aortic stenosis but develops symptoms on exercise (abnormal/positive exercise test). Also the presence of mean pressure gradient of 60mm Hg put this patient into the category of 'Very Severe Aortic Stenosis' or 'Critical Aortic Stenosis'.

Optimal management of asymptomatic severe Aortic Stenosis continues to be a source of ongoing clinical controversy. Surgical Aortic Valve Replacement and Watchfull waiting with frequent reassessments (observation), both continue to be legitimate though

debatable treatment options.
Since the patient in question has 'Very Severe AS' and 'Abnormal Stress Testing' he should be considered for surgical intervention in the form of Aortic Valve Replacement (A VR).

50-year-old patient with Asymptomatic Severe Aortic Stenosis

=5m/s, mean gradient >=50mm Hg, aortic valve ara <=0.6 cm2) when operative mortality is < 1% " align="left" height="132" width="316">**Positive Exercise Stress Test**

Mean Pressure Gradient > 60 *mm* **Hg**

Symptoms during exercise such as dyspnea, angina, and syncope or near syncope constitute positive criteria indicating an abnormal stress test in patients with asymptomatic aortic stenosis.
'Severe Aortic Stenosis with an abnormal response to exercise is considered a Class Hb indication for Aortic Valve Replacement according to the ACC/AHA Guidelines.'
'Severe Aortic Stenosis with an abnormal response to exercise is considered a Class IC indication for Aortic Valve Replacement according to European Cardiology Society Guidelines (ECS Guidelines)'

Mean pressure gradient > 60 mm Hg and/or Aortic valve area < 0.6 cm¯` and /or Aortic Jet velocity > 5.0 m per second is classified as *'Extremely Severe Aortic Stenosis'* (Critical Aortic Stenosis)
'Extremely Severe Aortic Stenosis (mean gradient > 60 mm Hg) is considered a class IIb indication for Aortic Valve Replacement according to the ACC/AHA Guidelines.'

Study	*Conclusion*
I. 'Clinical outcomes in non-surgically managed patients with very	*'Surgery should always be considered in very severe AS regardless of symptoms, and*

severe versus severe aortic stenosis' (Heart doi:O. 1136/heartjn1-2011-300137; Valvular heart disease; Original article)	*particular attention needs to be paid to their extremely poor outcomes.'*
2. *'Early Surgery Versus Conventional Treatment in Asymptomatic Very Severe Aortic Stenosis'* (Tirculation': 2010; 121: 1502-1509; Valvular heart disease; Original article)	*'Compared with the conventional treatment strategy, early surgery is associated with improved survival by effectively decreasing cardiac mortality and sudden cardiac death in patients with very severe AS. This result suggests that early surgery can be a therapeutic option to further improve clinical outcome in asymptomatic patients with very severe AS and low operative risk.'*

Classification of Aortic Valve Stenosis Severity

Severity	*Valve Area (cm2)*	*Maximum Aortic Velocity (m/sec))*	*Mean Pressure Gradient (mm Hg)*
Mild	*1.5 – 2.0*	*2.5 – 3.0*	*<25*
Moderate	*1.0 –1.5*	*3.0-4.0*	*25-40*
Severe	*0.6-1.0*	*>4.0*	*>40*
Critical (Extremely Severe)	*<0.6*	*>5.0*	*>50-60*

39. Sub-valvular Aortic Stenosis is known to be associated with all of the following, except:

a) Aortic Regurgitation

b) Coarctation of Aorta

c) Tricuspid Valve Atresia

d) Ventricular Septal Defect

Correct Answer - C
Answer is C (Tricuspid valve atresia)
Tricuspid Valve Atresia is not associated with Subvalvular Aortic Stenosis. Subvalvular Aortic Stenosis (Subaortic Stenosis)

- Subaortic stenosis is defined as obstruction to left ventricular outflow below the aortic valve.
- It is the second most common form of fixed aortic stenosis.
- The most common form of subaortic stenosis is 'Discrete'

Subaortic Stenosis is further classified into 'Discrete' type and 'Diffuse Tunnel-Type' narrowing
Types of Subaortic Stenosis
`Discrete' (85 to 90 percent) : Most common form of subaortic stenosis `Diffuse' or 'Long Segment Tunnel-Type'(10%to 15%)
Some have attempted to subdivide the discrete form into membranous and fibromuscular but such distinction is difficult

- Boys are more frequently affected than girls at a ratio of approximately 2:1.
- Subaortic stenosis is associated with other cardiac abnormalities in 50% to 70% of patients

The two most_ frequently associated defects with subaortic stenosis

are Ventricular Septal Defect and Coarctation of Aorta.

Aortic regurgitation is the most common complication of subaortic stenosis *occurring in as many as 50 percent of patients*

Cardiac Anomalies Associated with subaortic stenosis

- Aortic regurgitation
- Aortic valve stenosis
- Patent ductus arteriosus
- Coarctation of the aorta
- Interrupted aortic arch
- Mitral valve abnormalities
- Ventricular septal defect
- Repaired a trioventricular septal defects
- Double-chambered right ventricle

40. The most common cause of tricuspid regurgitation is secondary to

a) Rheumatoid heart disease

b) Dilatation of right ventricle

c) Coronary artery disease

d) Endocarditis due to intravenous drug abuse

Correct Answer - B
Answer B (Dilatation of right ventricle)
"Most commonly Tricuspid Regurgitation is functional and secondary to marked dilatation of RV and the tricuspid annulus"

41. Hepatomegaly with liver pulsation indicates:

a) TR

b) MR

c) Pulmonary hypertension

d) MS

Correct Answer - A
Answer is A (Tricuspid Regurgitation)
Systolic pulsations of the liver and marked hepatomegaly are characteristic features of Tricuspid Regurgitation.
`Hepatic pulsation in Tricuspid Regurgitation are caused by reversed systolic blood flow in the great veins'
In about 2/3rd of patients with Tricuspid Regurgitation there is associated systolicpulsations of liver which may be considerably enlarged and tender'

42. An association of which of the following bacteria has been suggested with atherosclerosis:

a) Staphylococcus Aureus

b) Streptococcus Pneumoniae

c) Chlamydia Pneumoniae

d) Aspergillus Fumigatus

Correct Answer - C
Evidence for Chlamydia Pneumoniae thus far presents the strongest association with human atherosclerosis.

43. True about Dressler's syndrome is all, except :

a) Occurs with in hours after myocardial infarction

b) Recurrence may be seen

c) Chest pain is common

d) Responds well to salicylates

Correct Answer - A

Answer is A (Occurs with in hours after myocardial infarction)

Dressler's syndrome develops after an interval of 1 to 4 weeks (or even month) following cardiac injury (MI) and not within hours.

Dressler's syndrome / Post Cardiac Injury Syndrome

- *Dressler's syndrome refers to an acute farm of pericarditis that develops after myocardial infarction*
- *The pericarditis typically develops I to 4 weeks following cardiac injury/MI but may appear after several months*
- *Recurrence may be seen sometimes upto 2 years or more after MI / Injury*
- *Pathological pericarditis may be of the fibrinous variety*
- *The mechanism is not certain but they are believed to result from a hypersensitivity reaction in which the antigen originates from the injured myocardial tissue.*
- *Circulating antibodies to myocardium occur frequently.*
- *The principal symptom is 'chest pain' of acute pericarditis.*
- *Leukocvtosis, T ESR and ECG changes of acute Pericarditis may also occur.*
- *The pericarditis is usually resolves in I to 2 weeks and often no treatment is necessary apart from aspirin, NSAIDS or analgesics.*
- *Therepy with NSAIDS or corticosteroids is usually effective.*

44. Contractile Dysfunction is the dominant feature of which of the following types of cardiomyopathies

a) Dilated cardiomyopathy

b) Restrictive cardiomyopathy

c) Hypertrophic cardiomyopathy

d) Infiltrative cardiomyopathy

Correct Answer - A
Answer is A (Dilated cardiomyopathy)
Contractile dysfunction (systolic failure) is the dominant feature of dilated cardiomyopathy.
`An enlarged left ventricle with decreased systolic function (contractile dysfunction) as measured by left ventricular ejection fraction charachterizes diated cardiomyopathy. Systolic failure is more marked than the frequently accompanying diastolic dysfunction '

45. The most common type of cardiomyopathy in India is:

a) Dilated Cardiomyopathy

b) Hypertrophic Cardiomyopathy

c) Toxic Cardiomyopathy

d) Restrictive Cardiomyopathy

Correct Answer - A

Answer is A (Dilated Cardiomyopathy)

Dilated Cardiomyopathy (DCM) is the most common type of cardiomyopathy in India and the western world.

`Dilated Cardiomyopathy (DCM) is the most common type of cardiomyopathy'

Note :

The most common cause of dilated cardiomyopathy is Idiopathic (Two-Thirds) The most common toxin implicated in chronic dilated cardiomyopathy is Alcohol

46. The most common toxin causing Dilated Cardiomyopathy is:

a) Alcohol

b) Chemotherapeutic agents

c) Heavy metal

d) Occupational exposure

Correct Answer - A
Answer is A (Alcohol)
Chronic Alcohol Consumption is the most common cause of Toxic Dilated Cardiomyopathy. Alcohol is the most common toxin implicated in chronic dilated cardiomyopathy'
Note :
Dilated cardiomyopathy is the most common type of cardiomyopathy The most common cause of dilated cardiomyopathy is Idiopathic (Two-Thirds) Alcohol Consumption is the most common cause of Toxic Dilated Cardiomyopathy

47. Tako-Tsubo Cardiomyopathy is a type of:

a) Dilated Cardiomyopathy

b) Restrictive Cardiomyopathy

c) Hypertrophic Cardiomyopathy

d) Toxic Cardiomyopathy

Correct Answer - A

Answer is A (Dilated Cardiomyopathy)

Tako-Tsubo cardioniyopathy is a rare form of dilated cardiomyopathy.

Tako-Tsubo cardiomyopathy also known as stress cardiomyopathy, apical ballooning syndrome or 'Broken Heart Syndrome' is a type of dilated cardiomyopathy seen predominately in older women (usually over the age of 50 years) after sudden intense emotional or physical stress. It is thought to be caused by the release of catecholamines (adrenergic surge) from severe phʸsical and/or emotional stress. The ventricle shows global ventricular dilation with basal contraction forming the shape of a narrow necked jar called 'Taka-Tsubo' which is used in Japan to trap octopi. In the majority of cases all the symptoms are resolved in 3to 7 days without any residual effects.

48. Which of the following structures of the pericardium is insensitive to pain:

a) Fibrous Pericardium

b) Parietal layer of Serous pericardium

c) Visceral layer of Serous pericardium

d) All of the above

Correct Answer - C

Answer is C (Visceral layer of Serous pericardium)

The visceral layer of serous pericardium is insensitive to pain. The visceral layer of the serous pericardium is supplied by the sympathetic trunk and branches of the vagus nerves which are Pain Insensitive

Note :

The pain of pericarditis typically originates only from the pain sensitive parietal layer (lower two thirds) and is transmitted by the phrenic nerve. Pain from the heart(angina) originates in the muscles and vessels and is transmitted by sympathetic nerves

Fibrous pericardium and Parietal layer of the Serous Pericardium are supplied by the phrenic nerve and are pain sensitive

Nerve Supply of The Pericardium

- Phrenic nerves (C3-05) (This is the primary source of sensory fibres)
- Pain sensations conveyed by these nerves are commonly referred to the skin (C3 -05 dermatomes) of the ipsilateral supraclavicular region (top of the shoulder of the same side).
- Vagus nerve (Their function is uncertain)
- *Sympathetic trunks* (Vasomotor)

49. Chest pain from pericardial inflammation in pericarditis is referred by:

a) Vagus nerve

b) Phrenic nerve

c) Trigeminal nerve

d) Sympathetic nerves

Correct Answer - B
Answer *is* **B (Phrenic nerve)**
The phrenic nerve (C3, 4, 5) provides sensory innervation to the fibrous and parietal layers of the pericardium. When pain sensitive areas of pericardium are stimulated by disease, pericardial pain is perceived as pain in the neck and around the trapezius muscle via the phrenic nerve (The skin above the clavicle (C3, 4, 5 dermatomes))
Note: The phrenic nerve does not innervate the heart but does give off somatosensory branches to the pericardium (pericardial branches) in the middle mediastinum on its way to the diaphragm
Note: The phrenic nerve only innervates the pericardium and does not innervate the heart

50. Hypertension with Hypokalemia is seen in:

a) Bartter Syndrome

b) Liddle's Syndrome

c) Gitelman's Syndrome

d) All of the above

Correct Answer - B
Answer is B (Liddle's Syndrome)
Liddle's Syndrome is typically associated with Hypokalemia and Hypertension. Rartter's Syndrome and Gitelman's Syndrome are also associated with hypokalemia but without hypertension.
Liddle's Syndrome : Review
Pathophysiology:
- *Autosomal dominant disorder.*
- *Genetic defect in the collecting tubule sodium channel, resulting in in*

of inhibition by higher levels of intracellular sodium
Age of Presentation
- *Often diagnosed at young age, but can present in adulthood due to p*

Clinical presentation
- *Classic triad of hypertension, metabolic alkalosis, and hypokalemia.*
- *Consider iffamily histor^{y} of hypertension and/or hypokalemia. at you*

Lab data
- *Metabolic alkalosis, hrpokalemia (although some are low normal), lo*

Treatment:
- *Lifelong. Potassium-sparing diuretic which closes the sodium channe*

Spironolactone does not work because aldosterone is not causing the s

51. First line drug choice for management of hypertension in patients with angina:

a) Beta Blockers

b) ACE Inhibitors

c) Calcium Channel Blockers

d) Hydralazine

Correct Answer - A
Answer is A (Beta Blockers)
'Hypertension: A companion to Braunwald's Heart Disease (Elsevier) 2007/335
Beta-blockers are the first line drugs of choice for treatment of hypertension in patients with coronary artery disease & stable angina
`Beta blockers are the first line choice when treating hypertension in a patient with coronary artery disease' — Evidence Based Medicine Guidelines (John Wiley & Sons)
'Beta blockers reduce angina symptoms, improve mortality and lower BP, and they should be the drugs offirst choice in hypertensive patients with CAD and stable angina' — 'Hypertension: A companion to Braunwald's Heart Disease'

52. Q. Initial Antihypertensive agent of choice in a patient with stable ischemic heart disease is

a) Beta-Blockers

b) Alpha-Blockers

c) Calcium Channel Blockers

d) Ace Inhibitors

Correct Answer - A
Answer *is* A (Beta-Blockers)
Beta Blockers are recommended as First Line Agents of choice for treatment of hypertension in hypertensive patients with Stable Ischemic Heart Disease.

53. All of the following statement about atrial myxomas are true, except:

a) Most common site is Left Atrium

b) Most common in young individuals

c) Distant metastasis are rare

d) Most myxomas are familial

Correct Answer - D
Answer is D (Most myxomas are fmilial)
Most cardiac myxomas are sporadic while some may he familial.

54. True about subcutaneous nodule in Rheumatic fever

a) Non tender

b) Most common manifestation

c) Present in extensor surfaces

d) a and c

Correct Answer - D
Answer is A & C (Non tender; Present on extensor surfaces)
Subcutaneosis nodules in Rheumatic fever are non tender and commonly located on extensor surfaces These are a rare manifestation of Rheumatic fever and are commonly associated with carditis

Features of Subcutaneous nodules in Rheumatic Fever

- Rare manifestation (. I% of patients with acute Rheumatic fever)
- Delayed manifestation (appearing 2-3 weeks after onset of disease)
- *Located commonly along the extensor surfaces of tendons near bony prominences (particularly hands, feet, elbows, occiput / occasionally vertebra)*
- *Painless (Non tender)*
- *Mobile*
- *Small in size (0.5 – 2cm)*
- *Commonly assoicated with carditis*
- *Nodules last for just a few days to upto 3 weeks*

55. All of the following are true regarding Tetralogy of fallot except –

a) Ejection systolic murmur in second intercostal space

b) Single second heart sound

c) Predominantly left to right shunt

d) Normal jugular venous pressure

Correct Answer - C
Answer is C (Predominantly left to right shunt)
Tetralogy of fallot is associated with a predominant Right to left shunt
Tetralogy of fallot is associated with a predominant Right to left shunt
Tetralogy offallot is associated with Right ventricular out flow tract obstruction due to Pulmonic Stenosis
This results in flow of blood from right to left across the VSD into the aorta – Predominant Right to left shunt

56. Right axis deviation is seen in all except

a) VSD

b) Tricuspid atresia

c) Pulmonary atresia

d) ASD

Correct Answer - B

Answer is B (Tricuspid Atresia)

Tricuspid Atresia is associated with Left Axis deviation and not Right 4xis deviation.

Symptoms and signs of Tricuspid Atresia are similar to those of Tetralogy of Fallot.

Features suggesting Tricuspid Atresia are

- Left ventricular type of apical impulse
- Prominent large 'a' waves in JVP
- Enlarged liver and presystolic pulsations (a waves)
- Left axis deviation and left ventricular hypertrophy on ECG

57. All of the following are seen in Coarctation of Aorta, Except:

a) Diminution of femoral pulsations

b) High incidence of associated Bicuspid aortic valve

c) Left ventricular Hypertrophy

d) Boot Shaped Heart

Correct Answer - D
Answer is D (Boot Shaped Heart)
Boot Shaped Heart is not a radiological feature of Coarctation of Aorta.Boot Shaped Heart is typically seen in Tetralogy of Fallot.
Boot Shaped Heart (Couer en Sabot)
Tetralogy of Fallot and Tetralogy of Fallot with pulmonary atresia (Pulmonary atresia with VSD)
Note that a Boot Shaped Heart may also be seen in Truncus Arteriosus (less commonly)
Coarctation of Aorta is associated with Hypertension in upper extremity with marked diminution of pulsation in lower extremities. Coarctation is also typically associated with Left Ventricular Hypertrophy from pressure overload. Bicuspid Aortic Valve is the most common associated cardiac anomaly in patients with Coarctation. Typical Radiological signs in Coarctation include Indentation of Aorta at site of Coarctation and '3 Sign' or para-mediastinal shadow together with notching of inferior surface of ribs.

58. Acute Infective Endocarditis with abscess formation is most commonly associated with

a) Listeria

b) Staphylococcus

c) Streptococcus

d) Enterococcus

Correct Answer - B
Answer is B (Staphylococcus)
Acute Infective Endocarditis with abscess formation is most commonly associated with staphylococcus.
`The most common organism causing acute infective endocarditis overall is staphylococcus aureus. Staphylococcus aureus endocarditis is particularly virulent and associated with annular and myocardial abscess formation and a higher mortality'

59. Antiboiotic Prophylaxis for infective endocarditis is indicated in:

a) Isolated secundum ASD

b) Mitral valve prolapse without regurgitation

c) Prior coronary artery bypass graft

d) Coarctation of aorta

Correct Answer - D
Answer *is* D (Coarctation of Aorta)
Coarctation of Aorta is a high risk cardiac lesion fior the development of infective endocarditis and an indication fir antibiotic prophyloxis.

60. Most common valvular lesion in carcinoid syndrome of heart is:

a) Aortic stenosis

b) Tricuspid regurgitation

c) Mitral Stenosis

d) Aortic Regurgitation

Correct Answer - B
Answer is B (Tricuspid Regurgitation)
Carcinoid syndrome *most* ***frequently involves the ventricular aspect of the tricuspid valve and leads to Tricuspid Regurgitation***

61. Osborne waves in ECG are seen in :

a) Hypothyroidism

b) Hypothermia

c) Hypocalcemia

d) Hypokalemia

Correct Answer - B

Answer is B (Hypothermia)

Osborne waves also called J waves are typically seen in Hypothermia.

Wave; Osborne Wave *(Camel-hump sign, Late delta wave, Hat-hook junction, or Current of injury*

- *wave (Also termed the' Osborne wave) is the most common ECG finding in patients with hypothermia*
- *h is characterized as a positive deflection in the terminal portion of the QRS complex and elevation of the J point*
- *waves are most commonly found in the anterior and lateral precordial leads and in lead IL although they may he present in only a single lead*
- *They usually occur in patients with core body temperatures less than 32° C (90°F) and often appear larger when the temperature is below 30°C (86°f).*
- *The size of the J waves usually correlates inversely with the body temperature: as the body temperature increases, the J wave gradually becomes smaller.*
- *Cigarette smoking is the single most important modifiable risk factor for atherosclerosis*
- *Smoking is the single most important modifiable risk factor¸ jOr the development of Peripheral Artery Disease (PAD)*

- *Smoking cessation is the single most important target for coronary artery disease (CAD) Prevention*

62. The most important modifiable risk factor for Stroke is:

a) Hyperlipidemia

b) Diabetes mellitus

c) Cigarette Smoking

d) Hypertension

Correct Answer - D
Answer is D (Hypertension)
Hypertension is the single most important, modifiable risk factor for stroke.
Treatment of hypertension to desired Blood Pressure is the most cost effective strategy for the prevention of both ischemic and haemorrhagic stroke.

63. All are seen in Hemolytic anemia *except:*

a) Hemosiderinuria

b) Reticulocytosis

c) Spherocytosis

d) Increased haptoglobin

Correct Answer - D

Answer is D (Increased Haptoglobin)

Hemoglobin binding proteins such as Haptoglobin are reduced or absent.

Characteristic features of Hemolytic Anemia:

Increased red cell breakdown

- Serum bilirubin is ↑ed *(unconjugated hiliruhin ↑edd)C)*
- *Urine urobilinogen is ↑ed Q*
- *Fecal stercohilinogen is ↑ed Q*
- Hemoglobinemia / Hemoglobinuria Q
- :Vfethemoglohinemiac)
- Hemosiderinuria
- *Hemoglobin binding proteins Q such as Haptoglobin and Hemopexin are reduced or absent. Q*
- *Plasma Lactic dehydrogenase (LDH) is*

Compensatory increase red cell production

Reticulocvte count is fed

Routine blood jilm shows a variety of abnormal morphological types of red cells

- Schistocytes

- Spherocytes[Q] etc.

Bone narrow shows erythroid hyper plasia with raised iron stores.Q
X Rays of hones show :
Evidence of expansion of marrow space, especially in tubular hones & in skullQ - Bossing of skull()

64. A patient with Myeloproliferative syndrome presents with decreased while cell count and decreased platelets. The most likely diagnosis is:

a) Chronic myeloid leukemia

b) Myelofibrosis

c) Polycythemias vera

d) Essential thrombocytosis

Correct Answer - B

Answer is B (Myelofibrosis)

Myelofibrosis may be associated with decreased white cell count and decreased platlet counts. Myelofibrosis is an established cause for panyctopenia with cellular marrow.

Condition	WBCount	Hematocrit/ Red cell mass	Platelet count	Red cell morphology	Splenor
CML	↑↑	N	N or ↑	N	*Massive*
Myelofibrosis	N or ↓ or ↑	N or ↓	↓ or N or ↑	Abnormal	*Massive*
Polycythemia	N or ↑'	↑	N or ↑	N	*Moderat (Massive late stag*
Essential Thrombocytosis	N or ↑	N	↑↑	N	*Mild*

65. Gaisbock syndrome is known as

a) Primary Familial Polycythemia

b) High Altitude Erythrocytosis

c) Spurious Polycythemia

d) Polycythemia Vera

Correct Answer - C
Answer is C (Spurious Polycythemia)
Gaisbock syndrome refers to Spurious Polycythemia or Relative Erythrocytosis due to decreased plasma volume.

66. Secondary Polycythemia may be seen in:

a) Cor pulmonale

b) Congestive cardiac failure

c) Acyanotic congenital heart disease

d) All of the above

Correct Answer - A

Answer is A (Cor pulmonale):

Secondary polycythemia due to decreased tissue oxygenation may be seen in chronic corpulmonale. Polycythemia may also be seen in association with cyanotic congenital heart diseases.

Physiologically Appropriate Polycythemia (Secondary to decreased tissue oxygenation or hypoxic erythropoietin production erythrocytosis)	**Physiologically inappropriate polycythemia (Secondary to appropriate erythropoietin production or response)**
• High-altitude erythrocytosis *(Monge disease)* • Pulmonary disease - Chronic cor pulmonale • Cyanotic congenital heart disease	• Tumors, cysts, hemangiomas, and so forth • Androgen abuse • Erythropoietin abuse - Ayerza syndrome • Familial polycythemia

- Hypoventilation syndromes
  - Primary alveolar hypoventilation
  - Pickwickian syndrome, Ondine curse
  - Positional desaturation
  - Sleep apnea
- Abnormal hemoglobins
  - Inherited
  - Acquired: Drugs and chemicals, carboxyhemoglobin
  - Familial polycythemia

67. Monge's disease refers to:

a) Primary Familial Polycythemia

b) High Altitude Erythrocytosis

c) Spurious Polycythemia

d) Polycythemia Vera

Correct Answer - B

Answer is B (High Altitude Erythrocytosis)

lionge's disease (Chronic :Mountain Sickness) is also known as High Altitude Pathologic Erythrocytosis.

Chronic Mountain Sickness;
Monge's disease;
(High Altitude Pathologic Erythrocytosis; High Altitude Excessive Polycythem

a)

- Excessive Erythrocytosis (Hb>19 /dL for females and 21/dL for males)
- Hypoxemia
- Pulmonary hypertension (in some cases)
- Right heart failure or Cor-Pulmonale (in severe cases)
- Recovery on descent to low altitude

Chronic Mountain Sickness is a clinical syndrome that occurs in natives or long? life residents above 2500m.

Headache, dizziness and fatigue are typical initial presenting symptoms

68. Erythropoietin is increased in all except:

a) Hepatocellular carcinoma

b) Renal cell carcinoma

c) Cerebellar Hemangioblastoma

d) Pancreatic carcinoma

Correct Answer - D

Answer is D (Pancreatic carcinoma)

Ectopic production of erythropoietin by cancer cells cause most paraneoplastic erythrocytosis. Cancers typically associated with this syndrome include Renal cancer, Hepatocarcinoma and cerebellar ..,,mangioblastomas.

Syndrome	**Protein**	**Cancers typically associated with syndrome**
Erythrocytosis *Paraneoplastic* ***syndrome***	***Erythropoetin***	• ***Renal cancers*** • ***Hepatocarcinoma*** • ***Cerebellar hemangioblastoma***

Tumours associated with Erythrocytosis :

- ***Hypernephroma***
- ***Hepatoma***
- ***Cerebellar***
- ***Hemangiblastoma***
- Adrenal adenoma
- Pheochromocytoma
- Meningioma
- Uterine fibromyoma

69. The lymphocytic and histiocytic variant of Reed-Sternberg cell is seen in:

a) Follicular center lymphoma

b) Lymphocyte depleted Hodkin's disease

c) Nodular sclerosis Hodkin's disease

d) Lymphocyte predominant Hodkin's disease

Correct Answer - D
Answer is D (Lymphocyte Predominant Hodgkin's disease)
Lympho-Histiocytic variants (L and H cells) have a delicate multilobed nucleus resembling a popcorn kernel and are also called popcorn cells.
Lymphohistiocytic variants are specific to lymphocyte predominance subtype of Hodgkin's Lymphoma.

70. Most common lymph node involved in Hodgkin's lymphoma is

a) Inguinal

b) Cervical

c) Axillary

d) Sub-clavicular

Correct Answer - B
Answer is B (Cervical)
The most common lymph nodes involved in Hodgkins Lymphoma are the cervical lymph nodes.
The most common lymph nodes involved in Hodgkin's Lymphoma are cervical lymph nodes and supraclavicular lymph nodes (60-70%)
'Detection of an unusual mass or swelling in the superficial, supra-diaphragmatic lymph nodes (60-70% cervical and supraclavicular, 15-20% axillary) is the most common presentation of Hodgkin's Lymphoma. Only 15 to 20 percent of patients have sub-diaphragmatic disease at presentation' — William's Manual of Hematology

71. Initial treatment recommended for newly diagnosed patient with CML is:

a) Allogenic Bone Marrow Transplantation

b) Imatinib Mesylate Therapy

c) TNF-a

d) IFN-a

Correct Answer - B

Answer *is* B (Imatinib Mesylate Therapy)

Harrison's 18th edition recommends starting treatment of newly diagnosed CML with TK inhibitors (Imatinib) and reserving alloginic transplantation for those who develop Imatinib resistance.

The therapy of CML is changing rapidly because we have a proven curative treatment (allogenic transplantation) that has significant toxicity and a new targeted treatment (imatinib) with outstanding outcome based on 8 year follow up data. We recommend starting with TK inhibitors (Imatinib) and reserving allogenic transplantation for those who develop imatinib resistance'

Note:

- The only curative treatment for CML is Allogenic stem cell Transpintation
- The treatment of choice in CML is Allogenic BMTe
- The drug treatment of choice in CML is ImatinibQ
- Initial treatment recommended for newly diagnosed patient with CML is Imatinib.

Treatment of CML MEW

- The only curative treatment for CML is Allogenic Stem Cell Transplantation (SCT) (Allogenic bone marrow transplantation)Q

- The treatment of choice for CML is also Allogenic Stem **Cell** Transplantation (SCT) (Allogenic bone marrow transplantation)e
- *The drug treatment of choice for CML is Imatinibe*
- *Interferon alpha (IFN a) used to be the drug treatment of choice for CML when Imatinab was not available*

72. Commonest site of lytic lesion, in multiple myeloma is

a) Vertebral column

b) Femur

c) Clavicle

d) Pelvis

Correct Answer - A
Answer is A (Vertebral column)
The commonest site of involvement in multiple myeloma is vertebral column.
Although *any* bone ma^{y} be involved, the following order of involvement *is* most often seen.
Vertebral column (66%) > Ribs (44%) > Skull(41%)> pelvis (28%)>frinur (24%) > clavicle(10%) > scapula(10%)

73. Which of the following may present with isolated prolongation of prothrombin time (PT):

a) Factor VIII deficiency

b) Factor VII deficiency

c) Factor XII deficiency

d) Factor IX deficiency

Correct Answer - B
Answer *is* B (Factor VII deficiency)
Factor VII deficiency may present with isolated prolongation of prothrombin time.
Deficiency of factor VIII, IX and XII may present with isolated prolongation of Partial Thromboplastin Time (APTT) and not isolated prolongation of prothrombin time (PT)
Cause of Isolated prolongation of PT (CMDT)
Vitamin K deficiency Warfarin therapy
Liver disease
Factor VII deficiency

74. Spontaneous muscle bleeding is typically seen in:

a) Hemophilia

b) Afibrinogenemia

c) Von Willebrand's disease

d) Scott's syndrome

Correct Answer - A
Answer is A (Hemophilia)
Spontaneous Hemarthrosis and spontaneous muscle hematomas are charachteristic of moderate or severe congenital factor VIII or IX deficiency (Hemophilia).
Spontaneous bleeding may also be seen in Afibrinogenemia, Von willebrand disease and Scott's syndrome (defect in platelet's activated surface that promotes thrombin formation), but it is most charachteristic (Hallmark) of Hemophillia or factor VIII & IX Deficiency. -

75. Recurrent Spontaneous Hemarthrosis is commonly seen in patients with Hemophilia when factor VIII levels are:

a) < 36 %

b) <10%

c) <5%

d) <1 %

Correct Answer - C
Answer is C (<5%):
Recurrent Spontaneous Hemarthrosis is commonly seen in patients with Hemophilia when factor VIII levels are less than 5 percent of normal (Moderate; Moderately severe form).

Classification	Levels of factor VIII	Implications
Mild	6-36 % of Normal (>5%)	Bleeding generally occurs in response to mild trauma
Moderate	2-5% of normal (<5%)	Associated with spontaneous bleeding. Recurrent Hemarthrosis is the most common manifestation
Severe	<1% of normal	Life threatening Bleeding manifestations may be seen

76. The most common manifestation of moderate /severe Hemophilia A is:

a) Recurrent Hemarthrosis

b) Recurrent muscle bleeding

c) Recurrent bleeding from gums

d) Recurrent Hematuria

Correct Answer - A
Answer is A (Recurrent Hemarthrosis):
Recurrent Hemarthrosis is the most common manifestation of Hemophilia A.
'Recurrent Hemarthrosis is the most common manifestation of Hemophilia-A occurring in up to two third of patients' —Primer on the Rheumatic Diseases
'In the severe form the most common bleeding manifestations are the recurrent hemarthroses'

77. All of the following are inherited platelet function disorders Except:

a) Bernard Soulier syndrome

b) Glanzman Thrombasthenia

c) Wiskott Aldrich Syndrome

d) Weber-Christian disease

Correct Answer - D
Answer is D (Weber-Christian disease)
Weber Christian Disease is not an inherited disorder of platelet function.
Weber Christian Disease is a relapsing febrile nodular non suppurative panniculitis characterized by multiple recurrent subcutaneous nodules, with accompanying fever. The laboratory abnormalities include elevated ESR, Anemia, Leucopenia or leucocvtosis, depression of complements and evidence of circulating immune complexes.
Classification of congenital disorder of platelet function:
1. Defects in platelet-vessel wall interaction (disorders of adhesion)
(a) von Willebrand disease (deficiency or defect in plasma vWF)
(b) Bernard-Soulier syndrome (deficiency or defect in GPIb)
2. Defects in platelet-platelet interaction (disorders of aggregation)
(a) Congenital alibrinogenemia (deficiency of plasma fibrinogen)
(b) Glanzmann thrombosthenia (deficiency or defect in GPIIb-IIia)
3. Disorders of platelet secretion and signal transduction
(a) Storage pool deficiency
(b) Quebec platelet disorder
(c) Chediak Higashi syndrome
(d) Gray Platelet syndrome

(e) Wiskott-Aldrich syndrome

4. Disorders of platelet coagulation – protein interaction

(a) Defect in facor Va-Xa interaction on platelets (Scott syndrome)

78. Diffuse esophageal spasm is best diagnosed by:

a) Endoscopy

b) Manaometry

c) Barium swallow

d) CT

Correct Answer - B
Answer is B (Manometry)
Diffuse oesophageal spasm is a type of oesophageal motility disorder. Such Motility disorders are best diagnosed by Manometry studies
`*Esophageal manometry is the key test for establishing the diagnosis of diffuse esophageal spasm' – CSDT*
`*Esophageal manometry is the only test that distinguishes diffuse esophageal spasm from other primary esophageal motor disorders.*
Diffuse Esophageal spasm:
Diffuse Esophageal spasm is a poorly understood hypermotility disorde
Presentation
- *Symptoms are aggravated by emotional stress, exertion (or relate*

Diagnosis
Manometry is the key to establish the diagnosis
The diagnosis is usually made by an esophagogram (Barium swallow) a study

Esophagogram

Manometry

- *M*
  to establish t
  - *Corkscrew esophagus is classical of Diffuse* *Cor*
    complains wit

esophageal spasm (seen in about 30% of cases) *(induce*
drug bethenechol) on manometric
(Radiological evidence of tertiary contractions)
convincir

- *Esophageal monometry is the only test that distinguishes*

diffuse esophageal spasm from other primary esophageal motor disorders - CSDT

- *An ambulatory motility rec*

manometry) is

preferred over standard manometry as contractions are intermittent and normal peristalsis is seen in between.

Ambulatory manometry is the single best investigation with a sensitivity of 90% and specificity of 100%

Note Though diftrse esophageal spasm is best seen on barium swallow itis iliagnosedby esophagealmanon ety.

o That means:-

i) Best investigation for visualization of difuse esophageal spasm -+ Barium swallow.

ii) Investigation of choice for diagnosis of difuse esophageal spasm -+ Manometry.

79. Most common site for squamous cell carcinoma esophagus is:

a) Upper third

b) Middle third

c) Lower third

d) Gastro-esophageal junction

Correct Answer - B

Answer *is* B (Middle 1/3rd)

The most common site of squamous cell carcinoma of esophagus is middle 1/3rd.

Site of squamous cell carcinoma	**Percentage of total**
Upper 1/3rd	20%
Middle 1/3rd	50%
Lower 1/3rd	30%

80. Most common site for carcinoma stomach is:

a) Antrum

b) Fundus

c) Lesser curvature

d) Greater curvature

Correct Answer - A
Answer *is* A (Antrum):
The most common site of gastric adenocarcinoma is antrum '40% tumors are in the antrum, predominantly on the lesser curvature, 30% arise in the body and fimdus, 25% at the cardia and 5% involve the whole organ'- CSDT

81. Cause of thick pancreatic secretions in cystic fibrosis?

a) Overproduction of mucin

b) Failure to clear mucin due to epithelial dysfunction

c) Defect in chloride channel leading to water reabsorption

d) Defect tin sodium channel leading to water reabsorption

Correct Answer - C
Answer **is C (Defect in chloride channel leading to water reabsorption):**
Thick exocrine secretions in Cystic Fibrosis result from a defect in CFTR Protein which acts as a chloride channel (defect in chloride channel is the primary abnormality).
Cystic Fibrosis CF is characterized by a defect in Cystic Fibrosis Transmembrane Regulator (CFTR) gene found on chromosome 7. The CFTR gene codes for the cell membrane transporter protein (CFTR Protein) that normally forms chloride channels in the plasma membrane. Defect in CFTR Protein results in a decrease in chloride permeability across the membrane of epithelial cells of exocrine glands. Since chloride transport across membranes is closely linked to Sodium transport, the defect in chloride channels, leads to an influx of salt and water into the cells resulting in dehydration of the extracellular fluid compartment, an increased chloride concentration in sweat (The basis of diagnostic sweat test) and thickening of exocrine secretions. Virtually all of the clinical manifestations of the disease can be attributed to the thick, tenacious secretions that accumulate in the ducts of exocrine glands

82. Celiac sprue diagnosed by

a) Intestinal biopsy

b) Unequivocal response to gluten restriction

c) Finding of organism

d) a and b

Correct Answer - D
Answer is A and B (Intestinal biopsy and Unequivocal response to gluten restriction)
The diagnosis of celiac disease requires the presence of characteristic histological changes on small intestinal biopsy together with a prompt and clinical and histological response (unequivocal response) following the institution of gluten free diet'

83. Most common CNS manifestation of Whipple's disease is :

a) Cerebellar ataxia

b) Supranuclear ophthalmoplegia

c) Seizure

d) Dementia

Correct Answer - D

Answer is D (Dementia)

CNS manifestations in Whipples disease include dementia (presenting as confusion in memory loss) along with focal features such as Seizures. Non specific symptoms like Confusion and Memory loss (Dementia) in all likelihood, should be more common a presentation than seizures.

Whipple's disease is a rare multisystemic illness caused by infection with the bacillus *'Tropheryma Whippelii' Q*

- *Essential al Diagnosis include :*

  a. Malabsorption *Q*

  b. Multisystemic involvement along with Fever, Lymphadenopathy and Arthralgias[Q]

  c. Duodenal Biopsy with PAS positive macrophages [Q] showing characteristic bacillus (with large cytoplasmic granules)(2

- *CNS invovement is seen in about 10%* of patients. Manifestations include

  - *Dementia* [Q] (confusion and memory loss)

  - Seizures, Coma, Myoclonus[Q]

- *Cranial N. findings* include Nystagmus and Ophthalmoplegia [Q]

Non specific symptoms like Confusion and Memory loss (Dementia) in all likelihood, should be more common a presentation than

in all likelihood, should be more common a presentation than seizures.
Ophthalmopegia is due to cranial nerve involvement and not supra-nuclear in type.

84. Secretory diarrhea is not seen in:

a) Phenolphthalein

b) Celiac disease

c) Cholera

d) Addison's Disease

Correct Answer - B

Answer is B (Celiac Disease)
Celiac Disease is associated with Steatorrheal diarrhoea from mucosa! malabsorption.

Secretory Diarrhea

- Certain Bacterial Infection
- Vibrio Cholera
- Enterotoxigenic E.Coli
- Non Osmotic Stimulant Laxatives
- Hormone Producing Endocrine Tumors
- Carcinoid,
- VlPomas,
- Gastrinomas,
- Medullary Carcinoma Thyroid (Calcitonin)
- Bile acids (endogenous laxatives)

Bowel resection / disease or fistula
Addison's Disease
Congenital Electrolyte Absorption defects
Chronic Alcohol Ingestion
Diabetic Diarrhea

Steatorrheal Diarrhea

Intraluminal maldigestion

- Pancreatic exocrine insufficiency,
- Bacterial overgrowth,
- Bariatric surgery,
- Liver disease

Mucosal malabsorption

- Celiac sprue,
- Whipple's disease,
- Infections,
- Abetalipoproteinemia,
- Ischemia

Postmucosal obstruction
(1° or 2° lymphatic obstruction)

85. Which of the following colonic polyps is not pre-malignant?

a) Juvenile polyps

b) Hamartomatous polyps associated with PeutzJeghers Syndrome

c) Villous adenomas

d) Tubular adenomas

Correct Answer - A
Answer is A (Juvenile Polyps):
Juvenile Polyps is the single best answer of choice.
Juvenile polyps (sporadic), in general occur singly and being hamartomatous lesions have no malignant potential-Robbins
Juvenile polyps are benign polyps - Sabiston
Pathologicall^{y} hamartomas are considered benign and devoid of malignant potential. However hamartomatous pol^{y}ps associated with Autosomal dominant hereditar^{y} s^{y}ndromes have now been established to carry a small malignant potential *(Rare)*

- *Juvenile Polyps are benign but Juvenile Polyps in association with Juvenile Polyposis syndrome carry small malignant potential.*
The juvenile polyps in Juvenile polyposis syndrome are usually hamartomas but they may contain adenomatous elements and may progress to adenomas. This syndrome is associated with increased risk of (9 – 25%) of colorectal cancer. Mutation in Tumor supressor gene SMAD4 are believed to cause 50 % of Reported cases.
- *Sporadic Hamartomatous polyps are benign but Hamartomas in association with Peutz Jaghers Syndrome may carry a small malignant potential.*

Peutz Jaghers Syndrome is associated with increased risk (2-10%) of cancer in the intestinal tract. (Sabiston) The malignant potential of polyps associated with Peutz Jaghers Syndrome is small – CSDT.

Review of Hereditary gastrointestinal polvposis syndromes

Hereditary *autosomal dominant*[Q] gastrointestinal polyposis syndromes

High Malignant Potential *Q* *(histologicall*[y] *adenomas Q)*			Rare (small) Ma *(histologi*	
Syndrome	Distribution	Associated	Syndrome	Distribution
Familial colonic	Large intestine	None	Peutz	SI > LI > Stomach
Polyposis	Large intestine		Jagher's	
Gardner's syndrome	> small intestine	Osteomas Lipomas Fibromas	syndrome	
		Epidermal cyst		LI > SI > Stomach
		Ampullaty Ca	Juvenile polyposis	
		Desmoid	syndrome	
Turcot's syndrome	Large intestine	Brain Tumours		

86. Which one of the following conditions commonly predisposes to Colonic carcinoma?

a) Ulcerative colitis

b) Crohn's disease.

c) Diverticular disease

d) Ischaemic colitis

Correct Answer - A
Answer *is* A (Ulcerative colitis)
Malignant potential is seen in both ulcerative colitis and Crohn's disease, but ulcerative colitis is a more important risk factor than Crohn's and hence the answer of choice here. Diverticular disease and ischaemic colitis do not predispose to cancer.
The risk of cancer in CD is considerably less than in patients with chronic U.C' - Ruhhnns.
Confusing fact:

- The cancer risk in CD and IX are probably equivalent for similar extent and duration of disease -- *Harrison 16th/ 1788*
- Patients with Crohn's pancolitis have similar risk —
Thus while certain texts are now suggesting that the cancer risk for both CD & UC are probably equivalent, these are other texts which identify U.C. as a significantly more important cause. As we have to pick one single best answer, the option of choice remains U.C.

87. . The triad originally described by Zollinger Ellison syndrome is characterized by

a) Peptic ulceration, gastric hypersecretion, non beta cell tumour

b) Peptic ulceration, gastric hypersecretion, beta cell tumour

c) Peptic ulceration, achlorhydria, non beta cell tumour

d) Peptic ulceration, achlorhydria, beta cell tumour

Correct Answer - A
Answer *is* A (Peptic Ulceration, Gastric Hypersecretion, Non (3 Cell Tumour)
Zollinger Ellison Syndrome is characterised by peptic ulceration due to gastrin hyper secretion by a non beta cell tumor.

88. Which of the following statements about Insulinoma is true:

a) Present in Pancreas

b) Mostly malignant

c) Surgery is usually not required

d) Usually multiple

Correct Answer - A
Answer is A (Present in Pancreas):
The most common site of Insulinomas is the Pancreas.

89. Massive bleeding per rectum in a 70 yr old patient is due to :

a) Diverticulosis

b) Carcinoma colon

c) Colitis

d) Polyps

Correct Answer - A
Answer is A (Diverticulosis)
Although anorectal disease is the most commonm cause of bleeding per rectum in the elderly, these lesions usually cause small amount of 'bright red' blood on the surface of stool and toilet tissue (small bleeds).
Diverticulosis may give rise to massive colonic bleed. The usual presentation of diverticular hemorrhage is that of brisk painless passage of a maroon coloured stool. It is the most common cause of massive bleeding per rectum in those above 55 years of aze and hence the answer here.
Angiodysplasias and diverticulosis were the most common reasons for LGIB
Common causes of Acute Lower G.I. bleeding over 55 years of age are :
1. Anorectal disease : Haemorrhoids and fissures
2. Diverticulosis
3. Angiodysplasia
4. Polyps and Cancer
5. Enterocolitis

90. Features of Hepatorenal syndrome are

a) Urine sodium < 10 meq/1

b) Normal renal histology

c) Renal function abnormal even after liver become normal

d) a and b

Correct Answer - D

Answer is A & B (urine Na < 10 meq/l and Normal Renal Histology)

Hepatorenal syndrome is associated with normal renal histology and supported by a urine sodium excretion l0meq/L

Hepatorenal syndrome

- Hepatorenal syndrome is defined as a state of functional renal failure (Reduced GFR) in patients with severe liver disease
- *Structurally /Histologically the kidneys are normal and recover function after successful liver transplantation.*
- The pathogenetic hallmark of hepatorenal syndrome is intense renal vasoconstriction with coexistent systemic vasodilatation
- The diagnosis of hepatorenal syndrome is considered in accordance with the following diagnostic criteria.

Diagnostic of Hepatorenal Syndrome

Major criteria

- *Low glomerular filtration rate. as indicated by serum creatinine > 1.5 mg/dL or 24-hr creatinine clearance < 40 mL/min*
- *Absence of shock, ongoing bacterial infection, fluid losses, and current treatment with nephrotoxic drugs*
- *No sustained improvement in renal function (decrease in serum creatinine to 1.5 nig/dL or increase in creatinine clearance to 40 mL/min) after diuretic withdrawal and expansion of plasma volume*

with 1.5L of a plasma expander

- *Proteinuria mg/d1, and no uhrasonographic evidence of obstructive uropathy or parenchymal renal disease Additional criteria*
- *Urine volume < 500 mL/d*
- *Urine sodium < 10 meq/L*
- *Urine osmolality greater than plasma osmolality*
- *Urine red blood cells <50/high- power field*
- *Serum sodium concentration < 130 niEqL*

Note: All major criteria must be present for the diagnosis of hepatorenal syndrome.
Additional criteria are not necessary for the diagnosis but provide supportive evidence.

91. All of the following are known predesposing factors for cholangiocarcinoma *except :*

a) CBD stones

b) Clonorchis sinensis

c) Ulcerative colitis

d) Primary sclerosing cholangitis

Correct Answer - A

Answer is A (CBD stone) :

*Cholelithiasis **is** not clearly a predisposing factor for Cholangiocarcinoma - Harrison*

The predisposing factors of cholangiocarcinoma include :

1. I. Chronic hepato-biliary parasite infection (Clonorchiasis or Asiatic cholangio-hepatitis) *Q*
2. Congenital Anomaly with ectatic ducts (Choledochal cyst).*Q*
3. Sclerosing cholangitis *Q*
4. Ulcerative colitis
5. Occupational exposure to carcinogens*Q*(Rubber + Automotive plants)

Note: *Nodular lesions that arise at the bifitrcation of hepatic ducts are called Klastskin tumors.* ***Q***

92. Central nervous system manifestation in chronic renal failure are result of all of the following, *except:*

a) Hyperosmolarity

b) Hypocalcemia

c) Acidosis

d) Hyponatremia

Correct Answer - B
Answer *is* B (Hypocalcemia):
'The total plasma calcium concentration in CRF patient is significantly low. *Patient with chronic renal disease tolerate the hypocakemia quite ;veil and rarely is a patient symptomatic from the decreased calcium concentration.*
This may be partly due to concomitant acidosis.' - *Harrison*
Hyponatremia, acidosis and hyper osmolarity can lead to various CNS manifestation as lethargy, altered mentation, seizure, coma, and paralysis etc.

93. Most common viral infection after Kidney Transplantation is:

a) EBV

b) HSV

c) CMV

d) HBV

Correct Answer - C
Answer is C (CMV):
CMV is the most common viral infection after Kidney Transplantation.
'CMV is the single most important viral infection in renal transplant recipients'- Critical Care Nephrology

94. Renal papillary necrosis is almost always associated with one of the following conditions :

a) Diabetes-mellitus

b) Analgesic-nephropathy

c) Chronic pyelonephritis

d) Post streptococcal GN

Correct Answer - A

Answer is A (Diabetes Mellitus):

`*Renal papillary necrosis, an accompaniment of acute pyelonephritis is most often seen in diabetics and is characterised by necrosis of renal papillae of one or both kidneys with sharped demarcation between necrotic and living tissue' — Dorlands*

Thus while papillary necrosis is a feature of more than one conditions mentioned in the question, it is most commonly seen with diabetes mellitus.

95. Medullary cystic disease of the kidney is best diagnosed by:

a) Ultrasound

b) Nuclear scan

c) Urography

d) Biopsy

Correct Answer - D
Answer is D (Biopsy):
Although ultrasonography and CT scan can be useful in making a diagnosis of medullary cystic disease, an open renal biopsy that ensures recovery of tissue from the corticomedullary junction is definitive.

96. All of the following statements about Bartter Syndrome and Gitelman's Syndrome are true, except:

a) Autosomal Recessive Inheritance

b) Bartter Syndrome Presents earlier in life than Gitelman's Syndrome

c) Genetic defect in Bartter Syndrome involves the transport proteins in the distal tubule

d) Hypercalciuria is more common in Bartter Syndrome

Correct Answer - C

Answer is C (Genetic defect in Bartter Syndrome involves the transport proteins in the distal tubule)

Genetic defect in Bartter Syndrome is located in the thick ascending limb of the loop of Henle.

Features	Bartter Syndrome (Mimics Loop Diuretics)	Gitelman's Syndrome (Mimics Thiazide Diuretics)
Inheritance	• Autosomal recessive disorder.	• Autosomal recessive disorder
Pathophysiology	• Genetic defect in the thick ascending limb of the Loop of Henle • *Defects in Na-K-2C/*	• Genetic defect in the distal tubul • *Defect in Na-C cotransporter in the distal* tubule

	co[L]transporter, K or Cl channels result in lack of concentrating ability	
Age of Presentation	• *Early in lift.*	• *Late childhood or early adulthood.*
Clinical presentation:	• *No Hypertension* • *Polyuria and polydipsia common* • *Neuromuscular symptoms are uncommon or mild* *Often presents with sensorineural deafness, triangular facies with drooping mouth, large* eves and pinnae, and renal failure.	• *No Hypertension (Can see lower than* average blood pressure due to salt wasting). • Polyuria and nocturia in 50-80%. • *Often present with neuromuscular symptoms* such as muscle cramping and spasms, significant fatigue
Lab data:	• *Chloride resistant metabolic alkalosis* • *Hvpokalemia* • Normal serum magnesium (may	• *Chloride-resistant metabolic alkalosis* • *Hypokalemia.* •

	be low). • Increased Urinary Calcium Excretion *(Hypercakiuric so at risk for kidney stones or* nephrocalcinosis)	Hypomagnesemi • Decreased Urinary calcium excretion • Ibpocalciuric so no increased risk of kidney stones or nephrocalcinosis)
Renal PGE2 production	• Increased	• *Normal*

97. FEVI/FVC is decrease in:

a) Asthma

b) Kyphosis

c) Scoliosis

d) Fibrosis

Correct Answer - A
Answer is A (Asthma):
Decreased FEV1/FVC suggests a diagnosis of Obstructive Lung Disease.
Amongst the options provided Asthma is the only condition that leads to Obstructive Pattern of Lung Disease and hence is the answer of choice Kyphosis, Scoliosis and Fibrosis are Restrictive Lung Diseases that are characterized by Normal or Elevated FEVI/FVC ratios.

98. Which of the following is NOT a complication of bronchiectasis :

a) Lung abscess

b) Lung cancer

c) Amylodosis

d) Empyema

Correct Answer - B

Answer is B (Lung cancer):

Bronchiectasis is not a premalignant condition.

Complications of Bronchiectasis:

- Massive hemoptysis.
- Empyema with or without bronchopleural fistula.
- Purulent pericarditis.
- Respiratory failure with chronic cor pulmonale.
- Metastatic abscesses in brain and bones.
- Secondary amyloidosis with nephrotic syndrome.
- Lung abscess: Bronchiectasis is a predisposing factor for Lung abscess .

99. Farmer's Lung is caused due to exposure to:

a) Bacillus Subtilis

b) Thermoactinomyces Sacchari

c) Aspergillus Fumigatus

d) Penicillium Nalgiovens

Correct Answer - B

Answer is B (Thermoactinomyces Sacchari)

The classic presentation offarmer's lung results from inhalational exposure to Thermophilic Actinomycetes species.

Thermophilic actinomycetes species include Saccharopolyspora rectivirgula (formerly Micropolyspora faeni), Thermoactinomyces vulgaris, Thermoactinomyces viridis, and Thermoactinomyces sacchari

Farmer's lung (Hypersensitivity pneumonitis, extrinsic allergic alveolitis)

- It is an immunologically mediated inflammatory disease of the lung involving the terminal airways.
- The classic presentation of farmer's lung results from inhalational exposure to Thermophilic *Actinomycetes* species.
- Thermophilic actinomycetes species include *Saccharopolyspora rectivirgula* (formerly *Micropolyspora .faeni), Thermoactinomyces vulgaris, Thermoactinomyces viridis,* and *Thermoactinomyces sacchari,* among others.

Farmer's Lung may occasionally result from exposure to various Aspergillus species also

- Exposure to large quantities of contaminated moldy hay is the most common source of inhalational exposure for farmers who develop

farmer's lung It is often a disease of dairy farmers who handle contaminated hay during the winter months.

- These organisms flourish in areas of high humidity and prefer temperatures of 40-60°C.
- Most cases of farmer's lung occur in cold, damp climates in late winter and early spring when farmers use stored hay to feed their livestock
- Patient typically presents 4-8 hours after exposure with fever, chills, malaise, cough, and dyspnea without wheezing

100. All of the following statements about silicosis are true, Except

a) Pleural plaques

b) Prediliction for upper lobes

c) Calcific Hilar Lymphadenopathy

d) Associated with tuberculosis

Correct Answer - A

Answer is A (Pleural plaques):

Pleural plaques are characteristically associated with Asbestosis and not silicosis

Silicosis has predilection for upper lobes

'Radiographs typically show fine nodularity in the upper zones of the lung' –

Rounded opacities appear in the upper lobes on chest radiograph' –

Silicosis is associated with calcific Hilar Adenopathy

Calcification of hilar lymph nodes may occur in as many as 20% of cases and produce a charachteristic "egg shell" pattern.

Silicosis is associated with Tuberculosis

'Because silica is cytotoxic to alveolar macrophages, patients with silicosis are at greater risk of acquiring lung infections that involve these cells as a primary defense including mycobacterium tuberculosis, atypical mycobacteria and fungi'

101. All the following are true about bronchopulmonary aspergillosis *except:*

a) Central bronchiectasis

b) Pleural effusion

c) Asthma

d) Eosinophilia

Correct Answer - B

Answer is B (Pleural effusion):

Pleural effusion is not seen as part of allergic bronchopulmonary Aspergillosis

- ABPA occurs in patients with preexisting asthma and cystic fibrosis. – Harrisons
- ABPA causes intermittent episodes of wheezing, pulmonary infiltrates, sputum and *blood eosinophilia,* low grade fever and brownish or greenish flecks in the sputum.
- Patients with repeated exacerbations develop *central bronchiectasis* and progressive loss of pulmonary function.

102. Primary complex in Liver in Congenital tuberculosis occurs through

a) Lymphatic Spread

b) Haematogenous Spread

c) Aspiration of Infected Amniotic fluid

d) Ingestion of Infected Amniotic Fluid

Correct Answer - B

Answer is B (Haematogenous Spread):

Primary Complex in Liver in cases of Congenital Tuberculosis occurs when infection enters the fetus through the umbilical veins (Trans-placental; Haematogenous Infection).

- *Liver is the most common Primary site of infection in* Congenital Tuberculosis caused by *Trans placental* or Haematogenous route
- *Lung is the most common Primary site of infection* in Congenital Tuberculosis caused by *aspiration of infected amniotic fluid*
- *Gastrointestinal Tract is the most common Primary site of infection* in Congenital Tuberculosis caused by *ingestion of infected amniotic fluid*

Since Lungs are eventually involved in most cases of congenital tuberculosis where Liver is the primary site of infection, Lungs are overall the most commonly involved sites in Congenital Tuberculosis

103. All of the following statements about Miliary Tuberculosis are true Except:

a) May occur following primary infection

b) May occur following secondary reactivation

c) Sputum microscopy is usually negative

d) Montoux is always positive

Correct Answer - D
Answer is D (Monotoux *is* always positive):
120. Montoux test is not always positive in cases of Miliary Tuberculosis.
It may be negative /non reactive as a result of anergy.
Miliary Tuberculosis max' occur following primary infection and secondary reactivation
Miliary tuberculosis is due to hematogenous dissemination of tubercle bacilli.
'Classically miliary tuberculosis develops following hematogenous dissemination at the time ofprimary infection' -Harrisons 1 lth/629
In adults it/diary tuberculosis may be due to reactivation of old disseminated foci (secondary reactivation)' - *Harrisons 17th/1013*
Sputum microscopy is usually negative (Harrisons 17th/1013)
'Sputum smear microscopy is negative in 80% of cases' – Harrison 17th/1013
Montoux test is negative in 20-30% of patients with Miliary Tuberculosis
`*The Tuberculn skin Test (montoux) may be non reactive due to anergy' -Nelson 5th/567*
`*Tubercular anergy is common in Miliary Tuberculosis and a negative skin test should not be a deterrant to the consideration of*

this diagnosis' - Harrison 11th/629
'Upto 30% of children have a negative tuberculin skin test' - 'Tuberculosis : Current concepts and Treatment' 2nd/201
Liver, kidney and spleen are common sites of involvement along with other sites
Almost every organ in the body may be involved. Mihaly tuberculosis is most prominent in Liver, spleen, kidney and other organs including bone marrow, adrenals, meninges, fallopian tubes and epididymis - Robbins 7th/386

104. Multidrug Resistance Tuberculosis (MDR-TB) should be considered in patients with:

a) Contact with a known case of MDR TB

b) Clinical Deterioration

c) Sputum smear positive at 5 months of treatment

d) All of the above

Correct Answer - D
Answer is D (All of the above):
'Infection Control In The community' by Lawrence & May (2003) All of the options require consideration for a diagnosis of MDR – TB.
Mult Drug Resistant Tuberculosis (MDR TB)
MDR-TB is defined by the presence of resistance to both Rifampicin and Isoniazid with or without other resistance
MDR TB should be considered in patients with:

- Previous drug treatment for tuberculosis
- Contact with a case of known MDR TB
- HIV infection
- Failure of clinical response on treatment
- Prolonged sputum smear or culture positive while on treatment (smear positivity at 4 months or culture positivity at 5 months)

105. Hydrostatic Pulmonary edema with fluid in alveoli is usually seen when PCWP is:

a) >6 mm Hg

b) >10 rnm Hg

c) >15 mm Hg

d) >25 mm Hg

Correct Answer - D
Answer *is* D (>25mm Hg):
Alveolar Pulmonary edema from elevated hydrostatic pressure (Cardiogenic) is typically associated with PCWP >25 ntm Hg. Elevated PCWP but with Pressure <25mm Hg is usually associated with interstitial pulmonary edema and not true alveolar pulmonary edema.
Hydrostatic pulmonary edema is also known as cardiogenic pulmonary edema (since it typically arises from left heart failure). The inefficient left ventricle causes blood to back up in the *pulmonary circulation, *increasing hydrostatic pressure* in the pulmonary capillaries (Increased PCWP).
High capillary pressure progressively forces fluid first into the interstitium (Interstitial Pulmonary Edema) and then into the alveoli (Alveolar Pulmonary Edema).
Three stages of pulmonary edema can be distinguished based on the degree of fluid accumulation

- **Stage 1** is characterized by excess fluid that can still be cleared by lymphatic drainage.
- **Stage 2** is characterized by the presence of interstitial edema.
- **Stage 3** is characterized by alveolar pulmonary edema (fluid and proteins enter the alveolar space)

PCWP	Stage	Interpretation in relation to Hydrostatic Pulmonary Edema
6-12 mm Hg (Normal)	Normal	No Pulmonary Edema
12-18mm Hg (Mild Increase)	Stage I	Usually not associated with pulmonary edema Excess fluid can still be cleared by lymphatic drainage No Physical or X-ray Findings are usually evident
18 – 25 mm Hg (Moderate Increase)	Stage 2	Characterized by the presence of interstitial edema Some physical findings including some fine crackling breath sounds may be evident X-ray evidences of pulmonary edema in the form of engorged pulmonary vessels and appearance of infiltrates may be seen
>25 mm Hg (Severe Increase)	Stage 3	Characterized by alveolar pulmonary edema (fluid and proteins enter the alveolar space) Physical findings are prominent and include clinically significant hypoxemia, tachypnea, respiratory distress, diffuse crackles, and wheezing breath sounds Obvious x-ray evidence of pulmonary edema (greatly increased infiltrates and vascular engorgement)

106. Normal Pulmonary Capillary Wedge Pressure (PCWP) is:

a) 6-12 mm Hg

b) 10-14 mm Hg

c) 12-18 mm Hg

d) 18-25 mm Hg

Correct Answer - A
Answer is A **(6-12 mm Hg):**
Capillary Wedge Pressure is between 6 to 12 mmHg.
Pulmonary capillary wedge pressure (PCWP) (Normal = 6 to 12 mm Hg)

PCWP is recorded when the PA catheter balloon is inflated and wedged in a branch of the pulmonary artery. PCWP reflects left atrial pressure
When there is no obstruction between the left atrium and ventricle PCWP =left atrial pressure = left ventricular end-diastolic pressure)

107. A 60 year old woman with fracture neck of femur presents to the emergency department a few days after her injury with sudden onset breathlessness and chest pain. The most likely diagnosis is:

a) Myocardial Infarction

b) Deep Vein Thrombosis

c) Pulmonary Embolism

d) Pleuritis

Correct Answer - C

Answer is C (Pulmonary Embolism):

Sudden onset of Dyspnea and Chest Pain following injury, surgery or immobilization strongly suggests a diagnosis of pulmonary thromboembolism.

108. The most common cause of preventable Hospital Death is

a) Acute Pulmonary Embolism

b) Heart Failure

c) Myocardial Infarction

d) Cancer

Correct Answer - A

Answer is A (Acute Pulmonary Embolism):

Embolism is the most common cause of Preventable Hospital Death. Acute Pulmonary Embolism is the most common cause ofpreventable Hospital Death' - 'The 5 minute ICU consult / Lippincott Williams/2012/384

Pulmonary embolism is the most common preventable cause of death in the hospital'.

- *Acute Pulmonary Embolism is the third most common cause of hospital death in the united states after heart failure and cancer*
- *Acute Pulmonary Embolism is the most common cause ofpreventable hospital death°*
- *Acute Pulmonary Embolism is the most common cause of death after surgery in a surgical patient° - 'Comprehensive Hospital Medicine: An Evidence based approach (Elsevier) 2007/89*

109. D-Dimer values may be increased in all of the following Except:

a) Myocardial infarction

b) Pneumonia

c) Anticoagulant therapy

d) Pregnancy

Correct Answer - C
Answer is C (Anticoagulant therapy):
D-Dimer values are falsely decreased in patients receiving anticoagulant therapy –Clinical Hematology Myocardial infarction, pneumonia and pregnancy are all established causes for false positive (Elevated) D-Dimer values

Elevated

True Positive

Thromboembolic Diseases

- PE
- DVT
- DIC
- Others

False Positive

- MI
- Pneumonia
- Sepsis
- Pregnancy
- Cancer
- Postoperative state
- Heart failure

110. D-Dimer is the most sensitive test for

a) DVT

b) Pulmonary Embolism

c) Acute Pulmonary adema

d) Acute myocardial infarction

Correct Answer - B
Answer is B (Pulmonary Embolism):
D-Dimer test is a sensitive test for detection of DVT and PE. Amongst DVT and PE, the D-Dimer test is less sensitive for DVT than PE • (More sensitive for PE)
The sensitivity of the D-Dimer assay is greater than 80% for DVT and greater than 95% for PE. The D-Dimer test is less sensitive for DVT than PE because the DVT thrombus size is smaller-Harrison 17th/1653

111. Best investigation when there is clinical suspicion of pulmonary embolism in a patient is-

a) D-Dimmer Assay

b) Multidetector CT angiography

c) Doppler ultrasound

d) Catheter angiography

Correct Answer - B
Answer is B (Multidetector CT Angiography):
For patients with strong clinical suspicions/high likehood of DVT. Imaging tests are obligatory.
CT scan with intravenous contrast (Multidetector CT Angiography) is the test of choice for the diagnosis of PE.
Invasive catheter based pulmonary Angiography *is highly specific but reserved for patients with unsatisfactory chest CT or those who require an interventional procedure like catheter directed thrombolysis or embolectomy.*

112. The treatment of choice in a patient with Massive Pulmonary Embolism in Shock is:

a) Thrombolytic Therapy

b) Low Molecular Weight Heparin

c) Aggressive fluid resuscitation

d) Diuretic Therapy

Correct Answer - A
Answer is A (Thrombolytic Therapy):
Normotension with Right ventricular hypokinesia suggests a diagnosis of submassive pulmonary embolism and stratifies the patient into an intermediate risk category. Treatment for intermediate risk patients with submassive PE is controversial. Guidelines recommend individual risk assessment for the thrombotic burden versus risk of bleeding. According to Harrisons textbook young patients without any comorbidities that fall into the intermediate risk category are excellent candidates for thrombolysis. The patient in question is a young 20 years old patient and the question makes no mention of any comorbidities, hence thrombolysis is the single best answer of choice.

113. Pulmonary Hypertension is defined as Pulmonary Artery Pressure:

a) >15mm Hg

b) >18mmHg

c) >20mmHg

d) >25rrnnHg

Correct Answer - D
Answer is D (>25mmHg):
*PH has been defined as an increase in mean pulmonary arterial pressure **(PAP) >** 25 mmHg at rest as assessed by right heart catheterization (RHO.*

Definition	**Characteristics**	**Clinical group(s)**
Pulmonary hypertension (PH)	• *Mean PAP >25 mmHg*	• *All*
Pre-capillary PH	• *Mean PAP >25 mmHg* • *PWP 15mmHg* • *CO normal or reduced*	• *Pulmonary arterial hypertension* • *PH due to lung diseases* • *Chronic thromboembolic PH* • *PH with under and/or multifactorial mechanisms*
Post-capillary PH	• *Mean PAP >25 mmHg* • *PWP >15 mmHg* • *CO normal or*	• *PH due to left heart disease*

reduced

Note: *High CO can be present in cases of hyperkinetic conditions such as systemic to pulmonary shunts (only in the pulmonary circulation), Anaemia. Hyperthyroidism, etc.*

CO =cardiac output; PAP =pulmonary arterial pressure; PH = pulmonary hypertension; PWP =pulmonary wedge pressure;

114. All of the following are Light's criteria for exudative I pleural effusion:

a) Pleural fluid protein to serum protein > 0.5

b) Pleural fluid LDH to serum LDH > 0.6

c) Pleural fluid LDH is > 2/3 times the normal upper limit for serum

d) Pleural fluid ADA to Serum ADA <16

Correct Answer - D
Answer is D (Pleural fluid ADA and Serum ADA <16):
Ratio of Pleural fluid ADA and Serum ADA <16 is not part of Light's Criteria.
Light's criteria, rely on a comparison of the chemistries in the pleural fluid to those in the blood, to establish the cause of the effusion as transudate or exudates.
According to Light's criteria a pleural effusion is likely exudative if at least one of the following exists

- The ratio of pleural fluid protein to serum protein is greater than 0.5
- The ratio of pleural fluid LDH and serum LDH is greater than 0.6
- Pleural fluid LDH is greater than 0.6 or Y3 times the normal upper limit for serum.

Note:
Exudative Pleural Effusions meet at least one of the above criteria while transudative effusions meet None These criteria misidentify around 25 percent of transudates as exudates

115. Most common cause of Mediastinitis is:

a) Tracheal rupture

b) Esophageal rupture

c) Drugs

d) Idiopathic

Correct Answer - B

Answer *is* B (Esophageal rupture):

Most cases of acute mediastinitis are due to esophageal perforation or occur after median sternotomy for cardiac surgery– Harrison

Acute Mediastinitis	**Chronic Mediastinitis**
1. Esophageal rupture *Q* 2. Median sternotomy for cardiac surgery	1. Tuberculosis / Histoplasmosis (most cases) *Q* 2. Sarcoidosis, silicosis *Q* 3. Other fungal diseases

116. All of the following statements about Non Small Cell Carcinoma of Lung (NSCCL) are true, Except:

a) Contralateral mediastinal nodes are a contraindication to surgical resection

b) Single Agent Chemotherapy is preferred for patient > 70 years with advanced disease

c) Squammous Cell Carcinoma is the most common NSCCL amongst Asian population

d) Gefitinib is most effective for female smokers with adenocarcinoma on histology

Correct Answer - D
Answer is D (Gefitinib is most effective for female smokers with adenocarcinoma on histology):
Gefitinib is an oral 'small molecule Tyrosine kinase Inhibitor' (that inhibit signalling via EGFR) approved for the treatment of patients with NSCCL. Data to support the use of Gefitinib in NSCCL are however diminishing and Gefitinib is most effective in females who have never smoked with adenocarcinoma on histology.
Single agent cgemotherapy is prefered for elderly patients (> 70 years)
American Society of Clinical Oncology (ASCO) recommends the use of single agent chemotherapy for elderly patients (> 70 years) with a poor performance status (2003 Guidelines)
It has however now been stressed (2009 Guidelines) that age alone should not be used to select chemotherapy for patients with advanced NSCLC. Physiological Age (not chronological age) and

performance status should be considered when selecting the chemotherapy regimen.

Chemotherapy for Advanced (Stage IV) NSCLC

Young patient

Good performance status (PS < 2)

- *Double agent chemotherapy is preferred for first line therapy*
- Platinum based combinations are preferred over non platinum based combinations

Elderly patient

Poor performance status (PS 2)

- *Single Agent Chemotherapy is preferred to reduce potential toxicity from chemotherapeutic agents.*
- Vinorelbine or docetexal are often used for single agent chemotherapy in the elderly with a poor PS.

Gefitinib is most effective for females with adenocarcinoma histology who have never smoked

Gefitinib is an acceptable second line agent for treatment of patients with advanced NSCLC with adequate performance status when the disease has progressed during or after first line platinum based chemotherapy.

Clinical Features that correlate with responsiveness to Gefitinib (Harrison)

- Female Sex
- Never smoking status
- Adenocarcinoma Histology
- Asian Ethinicity

Contralateral Mediastinal nodes are a contraindication to Surgical Resection

ALB. In otherwise fit individual, direct extension of tumour into the chest wall, diaphragm, mediastinal pleura or pericardium or to within 2 cm of the main carina does not exclude surgery. Though surgically resectable, patients with N2 (ipsilateral mediastinal) nodes may require neoadjuvant or adjuvant therapy.

Contraindication to surgical resection in NSCLC (Davidson)

- Distant metastasis (M1)
- Invasion of central mediastinal structures including heart, great vessels. trachea and oesophagus (T4)
- Malignant pleural effusion (T4)
- Contralateral mediastinal nodes (N3)
- FEV, < 0.8L
- Severe or unstable cardiac or other medical condition

Squammous Cell Carcinoma is the most common histological subtype of Lung Cancer in Asia (Including India)

- Most common lung cancer worldwide is adenocarcinoma
- *Most common lung cancer in India (Asia) is squammous cell carcinoma*
- *Most common lung cancer in women is adenocarcinoma*
- *Most common lung cancer in smokers is squammous cell carcinoma*
- *Most common lung cancer in nonsmokers is adenocarcinoma*
- *Most common lung cancer in young patients is adenocarcinoma*
- *Most common lung cancer to metastasize is small cell carcinoma*

117. Clubbing is least common in:

a) Squamous cell carcinoma

b) Adenocarcinoma

c) Small cell carcinoma of lung

d) Mesothelioma

Correct Answer - C
Answer is C (Small cell Ca of Lung):
`*Skeletal connective tissue syndromes including clubbing is usually seen in no n small cell carcinomas 'H-1 6th Clubbing is thus least common with small cell carcinoma of lung*

118. The most common site of bleeding in Hemoptysis is

a) Tracheobronchial tree

b) Pulmonary Parenchyma

c) Pleural Disease

d) All of the above

Correct Answer - A
Answer *is* A (Tracheobronchial tree):
The most common source of hemoptysis is the tracheobronchial tree.
The most common site of hemoptysis within the tracheobronchial tree are small to medium sized airways.
The most common site of bleeding is the tracheobronchial tree[Q]
The most common site of hemoptysis is bleeding from the small to medium sized airways [Q]

119. The artery most frequently responsible for bleeding in massive hemoptysis is

a) Bronchial Artery

b) Pulmonary Artery

c) Intersegmental Artery

d) Intercostal Artery

Correct Answer - A
Answer is A (Bronchial Artery):
The most common source of bleeding in massive hemoptysis are the Bronchial arteries which are part of the high pressure systemic circulation
The most common source of bleeding in hemoptysis is the tracheobronchial tree which can be affected by inflammation (bronchitis, bronchiectasis) or neoplasm (bronchiogenic carcinoma, endobronchial metastatic carcinoma or bronchial carcinoid tumor). The bronchial arteries which originate from either the aorta or from intercostal arteries, and are therefore part of the high pressure systemic circulation are the source of bleeding in bronchitis, bronchiectasis or with endobronchial tumors '
`*While alveolar haemorrhages arise from capillaries that are part of the low pressure pulmonary circulation, bronchial bleeding is generally from bronchial arteries which are under systemic pressure and therefore predisposed to large volume bleeding'*

120. Cause of central cyanosis include all of the following, Except

a) Chronic Asthma

b) Congenital Pulmonary stenosis

c) Congestive heart failure

d) Alveolar hypoventilation

Correct Answer - C
Answer is C (Congestive heart failure):
Congestive Heart Failure is a cause for Peripheral cyanosis and not central cyanosis
Cyanosis when present in Asthma, pulmonic stenosis and alveolar hypoventilation is of the central type.

121. Pulmonary Compliance is decreased in all of the following conditions, Except:

a) Pulmonary Congestion

b) COPD

c) Decreased Surfactant

d) Pulmonary Fibrosis

Correct Answer - B
Answer is B (COPD)
Pulmonary Compliance is increased in Emphysema (COPD) Pulmonary Congestion, decreased surfactant and pulmonary fibrosis are all associated with reduced pulmonary Compliance.

122. Thickening of pulmonary alveolar – capillary membrane is seen in :

a) Asthma

b) Bronchitis

c) Pulmonary fibrosis

d) Emphysema

Correct Answer - C
Answer is C (Pulmonary fibrosis):
Pulmonary Alveolar — capillary membrane thickening is a characteristic feature of interstitial lung disease like pulmonary fibrosis

123. Bronchial hyperplasia may be caused by all except?

a) Smoking

b) Theophylline

c) Prematurity

d) Allergy

Correct Answer - B
Answer is B (Theophylline):
Theophylline *relaxes the tone of bronchial smooth muscles, thereby causing bronchodilation*
It may he used in the treatment of bronchial hyperplasia, it certainly does not contribute to bronchial hyperplasia.
Smoking and other irritants cause the *hypertrophy of mucus glands*^{Q} within the brochial wall, and contributes to narrowing of bronchioles by a variety of factors.
Prematurity may *be associated with bronchopulmonary dysplasia*^{Q} *and bronchial hyperplasiae*

124. Which of the following drugs, is used for Smoking Cessation?

a) Naltrexone

b) Bupropion

c) Buprenorphine

d) Methadone

Correct Answer - B
Answer *is* B (Bupropion):
Bupropion (along with Varenicline and Nicotine replacement therapy) is a USFDA approved first line agent for pharmacotherapy in Smoking Cessation.
USFDA Approved Agents for Smoking Cessation

- *Nicotine Replacement Therapy* (Transdermal Patch, gum, lozenges, oral inhaler, nasal spray)
- *Bupropion* (Atypical Antidepressant with dopaminergic and noradrenergic activity)
- *Varenicline* (Selective partial agonist at the Alpha4-Beta2 Nicotinic A-Choline receptor that is believed to mediate nicotine dependence)

Clonidine and Nortriptyline are two other medications that have efficacy but are NOT USFDA approved for this indication. These are classified as second line agents.

125. All of the following statements about Churg Strauss Syndrome are true, except:

a) Marked Eosinophilia

b) Mononeuritis multiplex is common

c) Renal failure is common

d) Often associated with Allergic Rhinitis

Correct Answer - C
Answer is C (Renal failure is common):
Churg Strauss Syndrome is not prominent and renal failure is rare. The Renal disease in Churg Strauss Syndrome is less common and generally less severe than with granulomatosis with polyangitis (Wegener's) and microscopic polyangitis '- Harrison's 18th/2793
'Renal failure is rare in Churg Strauss syndrome - Pulmonary Involvement in Systemic Autoimmune Disease

126. All are features of Kawasaki disease, *except*

a) Peak incidence at age > 5 years

b) Aneurysm of coronary artery

c) Enlarged lymphnodes

d) Fever

Correct Answer - A

Answer is A (Peak incidence at age > 5 years) :

80% cases occur prior to age of 5 years with peak incidence < 2 years.

- Kawasaki disease is an Acute febrile multisystem disease of children.
- Prolonged fever over 5 days that is unresponsive to antibiotics is seen.
- Although the disease is generally benign & self limiting it is associated c coronary artery aneurysm in 25% of cases
- Non suppurative cervical lymphadenopathy is characteristic

127. True about Henoch Scholien purpura:

a) Abdominal pain

b) Can lead to end stage renal disease

c) Palpable purpura

d) All of the above

Correct Answer - D
Answer is D (All of the above):
Abdominal pain, Intussusseption, Palpable Purpura and progression to end stage renal disease may all be seen in H.S. purpura
Most common HSP affects4 -5years of age group
Abdominal pain is a characteristic manifestation of HSP (60-70% of patients)
Abdominal Manifestations

- Colicky Abdominal pain
- Nausea, Vomiting, diarrhea or constipation
- Gastrointestinal bleeding
- Intussusception

Intussusception may occur in H.S. purpura
Intussusception is rare in adults but may occur in children
HSP associated intussussception is usually ileoileal in contrast to idiopathic Intussusception which is ileocolic
Palpable purpura is the most common manifestation of HSP.
Palpable purpura is seen in virtually all pediatric patients
HSP can lead to End stage Renal Disease
Although HSP is usually associated with mild Glomerulonephritis, patients may progress to end stage renal disease. *'Renal disease is more frequent and tends to be persistant in adults who have a higher risk than children of developing End-stage Renal Disease' –*

CRDT 2nd/318

128. Sicca syndrome is associated with all, Except :

a) Midline granuloma

b) Chronic active hepatitis

c) Rheumatoid arthritis

d) Scleroderma

Correct Answer - A
Answer is A (Midline granuloma):
Midline granuloma has no association with Sjogren Syndrome (Sicca Syndrome)
As a result of its tendency to cause 'dryness' Sjogren's syndrome is often referred to as `Sicca' syndrome.
Being an autoimmune disorder this disorder is associated with a number of other disorders of autoimmune origin. Rheumatoid arthritis, chronic active hepatitis and scleroderma are known autoimmune disorders that are often associated with Sjogren Syndrome.
These include:
Autoimmune disorders associated with Sjogren's syndrome:
-Rheumatoid arthritis *(most common)*[Q] - Chronic active hepatitis
- SLE [Q] -Polymyositis
- Scleroderma[Q] -Hashimoto's thyToditis
Mixed connective tissue disease [Q] -Interstitial pulmonary fibrosis.
Primary biliary cirrhosis [Q] - Sarcoidosis.

- Vasculitis

What puzzles the question?

Sjogren is syndrome occurs as two types.

Primary form (Sicca syndrome)- when it occurs as an *isolated disorder.*

Secondary form* – when it occurs in association with other *autoimmune disease.

In the true sense it is not Sicca syndrome but the secondary form with which autoimmune disorders are associated. Nevertheless Midline granuloma remains the single best answer of exclusion.

129. Which of the following statements about Hemochromatosis is true:

a) Shows complete penetrance

b) Inherited as an autosomal recessive disorder

c) Phlebotomy is curative

d) More common in Females

Correct Answer - B

Answer is B Inherited as an autosomal recessive disorder

Hereditary Hemochromatosis is essentially inherited us an autosomal recessive condition.

Hereditar^{y} Hemochromatosis is essentiall^{y} an Autosomal Recessive condition

The most common form of hereditary hemochromatosis is related to mutations in *HFE gene,* which is a gene located on the short arm of chromosome 6 and is FILA linked

HFE related hereditary hemochromatosis (most common type) is inherited as an autosomal recessive condition

Hereditary Hemochromatosis shows incomplete penetrance

Incomplete penetrance refers to the lack of disease symptoms in an individual despite the presence of pathological gene mutation

*Expression of Hemochromatosis is variable and many **HFE** positive people neither have nor develop disease, thus displaying the phenomenon of incomplete penetrance*

This suggests that other genetic and / or environmental factors modify the pathogenesis of disease Hereditar^{y} Hemochromatosis is more common in Men

The clinical expression of disease is 5 –10 times more common in

men than women - Harrison Phlebotomy is an effective management option but it does not lead to cure
The therapy of hemochromatosis involves removal of excess body iron which is best accomplished by phlebotomy Phlebotomy is not curative and will be required at appropriate intervals to maintain ferritin levels (usually one phlebotomy every 3 months)' - Harrison

130. Sipple syndrome is also known as:-

a) MEN 1

b) MEN 2a

c) MEN 26

d) None of the Above

Correct Answer - B
Answer is B (MEN 2a):
Sipple syndrome refers to MEN Type-HA

131. A patient with cushinoid features presents with hemoptysis; he shows no response to dexamethasone suppression test; most likely diagnosis here is:

a) Adrenal hyperplasia

b) Adrenal adenoma

c) Ca lung with ectopic ACTH production

d) Pituitary microadenoma

Correct Answer - C
Answer is C (Ca lung with ectopic ACTH production);
Lack of suppression to dexamethasone challenge (ACTH producing tumor) and presence of hemoptysis (Carcinoma lung) in a patient with Cushinoid features suggests a diagnosis of Carcinoma lung with ectopic ACTH secretion.
As a method of diagnostic workup of any patient with suspected Cushings we screen the patient with plasma cortisol levels at 8:00 a.m. in the morning. Those with increased cortisol levels are subjected to a *dexamethasone supression test.*
In the given question there is lack of suppression to dexamethasone challenge so option (d) is out.
Out of the choices remaining the presence of hemoptysis points towards the diagnosis of carcinoma lung with ectopic ACTH.

132. For diagnosis of diabetes mellitus, fasting blood glucose level should be more than:

a) 126 mg/dl

b) 140 mg/dl

c) 100 mg/dl

d) 200 mg/dl

Correct Answer - A
Answer is A (126mg/dl):
For diagnosis of diabetes mellitus, fasting blood glucose level should be more than or equal to 126 mg/dl or 7mmol/l

133. Treatment of 42 year old obese man with blood glucose 450 mg, urine albumin 2+sugar 4+ketone 1+ is

a) Insulin

b) Glibenclamide

c) Glipizide

d) Metformin

Correct Answer - A
Answer is A (Insulin):
Presence of sugar and ketones in urine and the presence of hyperglycemia (400 mg Glucose) suggests a diagnosis of Diabetic ketoacidosis. The treatment of choice in Diabetic ketoacidosis is Insulin.

134. Which of the following is the most common type of pituitary adenoma?

a) Thyrotropinoma

b) Gonadotropinoma

c) Prolactinoma

d) Corticotropinoma

Correct Answer - C
Answer is C (Prolactinoma):
`*Prolactinomas (Lactotroph Adenomas) are the most frequent type of hyperfunctioning pituitary adenomas, accounting for about 30% of all clinically recognized pituitary adenomas' - Robbins*

135. Which drug is essential in Sheehan's syndrome:

a) Estrogen

b) Cortisone

c) Thyroxin

d) Growth hormone

Correct Answer - B
Answer is B (Cortisone):
"Multiple hormones must be replaced in patients with pan-hypopituitarism, but cortisol replacement is most important"(2 – *Harrison 14th /1994*
Sheehan's syndrome is post-partum infarction of the pituitary, leading to hypopituitarism.
Treatment consists of hormone replacement therapy including *Glucocorticoids,* Thyroid hormone, Sex steroids, Growth hormone, Vasopressin, etc. Thus, multiple hormones must be replaced, but remember that Cortisol replacement is most important.

136. All of the following may be used to treat Acute Hypercalcemia Except:

a) Hydration with saline

b) Calcitonin

c) Biphosphonates

d) Gallium Nitrate

Correct Answer - D
Answer is D (Gallium Nitrate)
Gallium Nitrate exerts s hypocalcemic effect by inhibiting calcium resorption from bone. Maximum hypocakemic effect of gallium nitrate may take 3-4 days to appear and it is not often used now because of availability of superior alternatives. Gallium nitrate is the single best answer of exclusion.

Treatment of Hypercalcemia	Onset of Action
Hydration with Saline	*Hours*
Forced diuresis (saline + loop diuretic)	*Hours*
Calcitonin	*Hours*
Intravenous phosphate	*Hours*
Pheomycin / Mithromycin	*Hours*
Dialysis	*Hours*
Biphosphonates	*Days (1 to 2 days)*
Glucocorticoids	*Days*
Gallium Nitrate	*Days (3-4 days)*

137. Which of the following is not seen in Vitamin D deficiency:

a) Increased alkaline phosphate

b) Decreased phosphate in urine

c) Hypophosphatemia

d) Decreased serum calcium

Correct Answer - B
Answer is B (Decreased phosphate in urine):
Vitamin D deficiency is associated with PTH induced phosphaturia or increased phosphate in urine.

138. All of the following are seen in Tumor Lysis Syndrome, except:

a) Hyperkalemia

b) Hypercalcemia

c) Hyperuricemia

d) Hyperphosphatemia

Correct Answer - B
Answer *is* B (Hypercalcemia):
Tumor lysis syndrome is associated with Hypocalcemia and not Hypercalcemia
Tumor lysis syndrome is a clinical entity characterized by destruction of large number of rapidly proliferating neoplastic cells following chemotherapy.

139. All of the following are features of thyrotoxicosis, EXCEPT-

a) Diastolic murmur

b) Soft non ejection systolic murmur

c) Irregularly, irregular pulse

d) Scratching sound in systole

Correct Answer - A

Answer is A (Diastolic murmur) :

Thyrotoxicosis is associated with a systolic murmur. ur. It is not associated with any diastolic murmur.

Cardiovascular manifestations of thyrotoxicosis:

- Sinus tachycardia[Q] *is the most common*[Q] *manifestation of Thyrotoxicosis.*
- Midsystolic murmur[Q]*heard best at left sternal border with or without Systolic ejection click.*
- Means lerman scratch[y]: *It is a systolic scratchy sound heard at the 2nd left intercostal space during expiration. It is thought to result from rubbing of hyperdynamic pericardium against the pleura*
- Angina and heart failure may be precipitated by hyperthyroidism in patients with underlying heart disease.

140. All of the following are associated with Thyroid storm, Except :

a) Surgery for thyroiditis

b) Surgery for thyrotoxicosis

c) Stressful illness in thyrotoxicosis

d) All

Correct Answer - A
Answer is A (Surgery for thyroiditis) :
Thyroid storm occurs in a thyrotoxic patient who has been inadequately prepared for thyroidectomy.
All options other than thyroiditis mentioned as options reflect a thyrotoxic state under stress and may lead to thyroid storm.
Thyroiditis may not be necessarily associated with thyrotoxicosis. Infact many firms of thyroiditis have associated hypothyroidism and hence these patients are unlikely to develop thyroid storm when taken for surgery.
Thyroid storm is an extreme form of thyroitoxicosis that may occur with a variety of conditions:
Conditions that may lead to thyroid storm in thyrotoxic patients
Stressful illness Thyroid surgery
Radioactive iodine administration

141. The most common presentation of endemic goiter is

a) Hypothyroid

b) Diffuse goiter

c) Hyperthyroid

d) Solitary nodule

Correct Answer - B
Answer is B (Diffuse Goiter) :
'Euthyroid state is generally the rule' – Robbins
Endemic goiter :occurs in geographical areas where the soil, water and food supply contains only low levels of iodine. The lack of the iodine leads to decreased synthesis of thyroid hormones and a compensatory increase in TSH, which in turn leads to follicular cell hypertrophy and hyperplasia and goitrous enlargement - Diffuse hyperplastic goitre. *'Euthyroid state is generally the rule' 'Rare patients are hyperthyroid'*

142. Decreased Radio iodine uptake *is I* are seen in

a) Toxic multinodular goiter

b) Grave's disease

c) Subacute thyroiditis

d) All

Correct Answer - C
Answer is C (Subacute thyroiditis)
Mayo Clinic Internal Medicine Concise Textbook (2007)/181: Harrison 18th/p 2917
Subacute Thyroiditis and Facititious thyroiditis are associated with decreased radioiodine uptake.

143. Carcinoid syndrome produces valvular disease primarily of the

a) Venous valves

b) Tricuspid valve

c) Mitral valve

d) Aortic valve

Correct Answer - C
Answer is B (Tricuspid valve);
The most common site of involvement is the – Ventricular surface of Tricuspid valve.
'Cardiac manifestations in carcinoid syndrome are due to fibrosis involving the endocardium, primarily on the right side although left side lesions also occur. Dense fibrous deposits are most commonly on the ventricular aspect of the tricuspid valve and less commonly on the pulmonary valve cusps.'
They can result in either constriction of valves (stenosis) or fixation of valves in open (regurgitation)
- Abnormality produced due to tricuspid valve involvement – Tricuspid regurgitation Q
- Abnormality produced due to pulmonary valve involvement – Pulmonary stenosis Q

144. Obesity is associated with all of the following *except:*

a) Osteoarthritis

b) Hypertension

c) Gall stones

d) Pancreatitis

Correct Answer - D
Answer is D (Pancreatitis):
Pancreatitis has no association with obesity.
RISKS OF OBESITY INCLUDE THE FOLLOWING :
A. Cardiovascular disease :
-increased risk of *atherosclerosis*
-increased risk of *hypertension*
- increased risk of *sudden death*
*B. P*ulmonary function : *Sleep apnea* and *Right heart failure*
C. Gall bladder disease : Increased incidence of *Gall stones*
D. Joint :
- Increased risk of *osteoarthritis* [Q] *:*partly due to added trauma of increased weight bearing
- Increased incidence of *Gout* [2]:due to impairment in urate clearance.
E. Diabetes mellitus : *Type II diabetes mellitus* [Q] is almost always seen in the obese.
F. Cancer : Increased incidence of endometrial carcinoma post menopausal breast cancer prostate cancer Q
- colorectal carcinoma
G. Skin : Increased incidence of *Acanthosis nigricans Q*
H. Endocrine :

Insulin Resistance : leading to Hyperinsulinemia is directly related to degree of obesity.
Growth hormone Q :secretions is reduced but IGF-I levels are normal thus growth is not affected. *Testosterone level is reduced.Q*

145. ACTH is produced by which of the following Bronchogenic carcinomas

a) Adenocarcinoma

b) Small cell carcinoma

c) Squamous cell carcinoma

d) Branchoalveolar carcinoma

Correct Answer - B
Answer is B (Small cell carcinoma):
Small cell carcinomas are the most common bronchogenic carcinomas associated with paraneoplastic syndrome and ectopic hormone production including ACTH.
ACTH may also be uncommonly produced by non small cell variants including adenocarcinoma and squamous carcinomas, but small cell carcinoma is the most common source of ectopic ACTH.
'Small cell carcinoma lung (>50%) is by for the most common cause of ectopic ACTH production followed by Thymic carcinoids (15%), islet cell tumors (10%), bronchial carcinoids (10%), other carcinoids (5%) and pheochromocytomas (2%) - Harrison's 18th/829
Ectopic ACTH Production (Bold)

- *Small cell carcinoma (50) Lung*
- *Thymic carcinoids (15%)*
- *Islet cell tumors (10%)*
- *Bronchial carcinoid (10%)*
- *Other carcinoids (5%)*
- *Pheochromocytomas (2%)*

146. IL-1 produces:

a) Tlymphocyte activation

b) Delayed wound healing

c) Increased pain perception

d) Decreased PMN release from bone marrow

Correct Answer - A
Answer is A (T lymphocyte activation)
IL-I in response to injury increases T lymphocyte activation.
It is secreted by phagocytes. It also increases PMN release from bone marrow and its actions include :

- Promotes wound healing.
- Diminishes pain perception.
- Increases body temperature.

147. Which one of the following is an Autosomal Dominant disorder :

a) Cystic fibrosis

b) Hereditary spherocytosis

c) Sickle cell anemia

d) G-6PD deficiency

Correct Answer - B
Answer is B (Hereditary Spherocytosis) :
Hereditary spherocytosis is inherited as an autosomal dominant disorder.

Autosomal dominant disorders:	**Autosomal recessive disorders:**	**X-Linked disorders:**
- Familial Hypercholesterolemia	- Deafness	- Hemophilia A Q (recessive)
- Hereditary nonpolyposis colon	- Albinism Q	-G6PD deficiency Q (recessive)
cancer	- Wilson's disease Q	-Ducchene/Becker muscular dystrophy
- Polyposis of the colon	- Hemochromatosis Q	(recessive)
- BRCA 1 and BRCA 2 breast cancer	- Sickle cell anemia Q	-Fabry's disease
- Marfan's syndrome Q	- β thalassemia Q	-Ocular albinism
- Hereditary spherocytosis Q	-Cystic fibrosis Q	-Testicular feminization syndrome
	- Hereditary	- Chronic

- Adult polycystic kidney disease	emphysema (*a*$_t$	granulomatous disease
Q	antitrypsin deficiency)	- Hypophosphatemic rickets Q
- Huntington's chorea Q	-Homocystinuria Q	(dominant)
- Acute intermittent porphyria Q	- Freidrich's ataxia Q	-Fragile-X syndrome Q (recessive)
- Osteogenesis imperfecta tarda Q	-Phenylketonuria Q	-Color-blindness Q
- von Willebrand's disease Q	-Fanconi's Syndrome	
- Myotonic dystrophy Q	—	
- Neurofibromatosis Q	-Gaucher's Disease ?	
- Tuberous sclerosis Q		
- Otospongiosis Q'otosclerosis		
- AchondroplasiaQ		

148. All of the following may occur in Down's syndrome except :

a) Hypothyroidism

b) Undescended testis

c) Ventricular septal defect

d) Brushfield's spots

Correct Answer - B

Answer is B (Undescended testis):

Health concerns observed in people with Down syndrome :

1. Sixty to 80 per cent of children with Down syndrome have *hearing deficits.*
2. Forty to 45 per cent of children with Down syndrome have *congenital heart disease. ASD and VSD are the most common forms of congenital heart diseases seen.*
3. Intestinal abnormalities also occur at a higher frequency in children with Down syndrome. Esophageal atresia, duodenal atresia and anal abnormalities are not uncommon in infants with Down syndrome.
4. Children with Down syndrome often have more eye problems than other children who do not have this chromosome disorder.
5. Eye problems such as strabismus, refractive errors and other eye conditions are frequently observed in children with Down syndrome.
6. *Brushfield's spots are whitish speckling on iris seen in light skinned people.*
7. Thyroid dysfunctions are more common in children with Down syndrome than in normal children. Between 15 and 20 per cent of children with Down syndrome have *hypothyroidism.* It is important to identify individuals with Down syndrome who have thyroid disorders

since hypothyroidism may compromise normal central nervous system functioning.

3. Skeletal problems have also been noted at a higher frequency in children with Down syndrome, including : patellar subluxation (incomplete or partial dislocation), hip dislocation, and atlantoaxial instability. Approximately 15 per cent of people with Down syndrome have atlantoaxial instability.
4. Other important medical aspects in Down syndrome, including immunologic concerns, leukemia, Alzheimer disease, seizure disorders, sleep apnea and skin disorders.

Undescended testis has not been described as an association with Down's syndrome.

149. Increased nuchal fold thickness is a feature of :

a) Paul-Bunnel syndrome

b) De-pan syndrome

c) Down's syndrome

d) Cri-duchat syndrome

Correct Answer - C
Answer is C (Down's Syndrome) :
Ultrasonography in a case of Down's syndrome may reveal increased nuchal fold thickness
Increased Nuchal fold thickness is associated with :-

- Aneuploidy
- Turner syndrome
- Trisomies (eg. Down syndrome)
- Congenital Heart defects
-

150. Tumor marker relevant with ovarian carcinoma is:

a) CA-125

b) CA-19.9

c) CD-30

d) CD-25

Correct Answer - A

Answer is A (CA 125) :

Manual of Clinical Surgery by Kirk CA *125 is the most* ***commonly*** *used tumor marker for ovarian cancer – Kirk*

CA-125 is found in derivatives of Coelomic epithelium, including pleura pericardium and peritoneum but is not detected in normal ovarian tissue.

151. Root value of ankle jerk-

a) L1-L2

b) L3-L4

c) L4-L5

d) S1

Correct Answer - D
Answer *is* D S1
The **ankle jerk reflex**, also known as the **Achilles reflex**, occurs when the Achilles tendon is tapped while the foot is dorsiflexed.
It is a type of stretch reflex that tests the function of the gastrocnemius muscle and the nerve that supplies it.
A positive result would be the jerking of the foot towards its plantar surface.
Being a deep tendon reflex, it is monosynaptic. It is also a stretch reflex.
These are monosynaptic spinal segmental reflexes.
When they are intact, integrity of the following is confirmed: cutaneous innervation, motor supply, and cortical input to the corresponding spinal segment.
This reflex is mediated by the S1 spinal segment of the spinal cord.

152. Most common cause of subarachnoid hemorrhage is:

a) Hypertension

b) A.V. malformation

c) Berry aneurysm

d) Tumours

Correct Answer - C
Answer *is* C (Berry aneurysm):
Most common cause of "subarachnoid Haemorrhage" is spontaneous rupture Q of saccular aneurysms (excluding trauma).
Most common cause of "intracerebral Haemorrhage" is *Hypertension Q* due to rupture of small *perfbrating arteries or Arterioles.Q*

153. Lateral Medullary Syndrome involves all of the following cranial nerves, Except:

a) Vth CN

b) IXth CN

c) Xth CN

d) XII CN

Correct Answer - D
Answer is D (XII CN):
Cranial Nerve XII is involved in the Medial medullary syndrome and not in Lateral medullary syndrome.
Lateral Medullary Syndrome involves the spinal nucleus of the trigeminal nerve and its tract (CN V); Vestibular nuclei (CN VIII); Nucleus Ambiguous (IX, X, XI) and fibers of the cranial nerves IX and X.
Cranial Nerves involved in Lateral Mediallary syndrome: V, VIII, IX, X, XI

154. All of the following are true about Weber's syndrome. Except

a) Ipsilateral occulomotor nerve palsy

b) Diplopia

c) Contralateral hemiplagia

d) Ipsilateral facial nerve palsy

Correct Answer - D
Answer is D (Ipsilateral facial nerve palsy):
Weber's syndrome is `midbrain' syndrome charachterized by Ipsilateral Occulomotor Nerve Palsy (Opthalmoplegia / Diplopia) and Contralateral Hemiplegia.

Midbrain Syndromes

	Symptoms and Signs	**Structures involved**
Weber's syndrome	• *Ipsilateral oculomotor nerve palsy*	• *Oculomotor nerve*
	• *Contralateral hemiplegia including face*	• *Corticospinal and corticobulbar tracts*
Benedikt's syndrome	• Ipsilateral oculomotor nerve palsy	• Oculomotor nerve
	• Contralateral hemiparesis including face	• Corticospinal and corticobulbar tracts
	• Contralateral intention tremor	• Red nucleus
Claude's syndrome	• Ipsilateral oculomotor nerve palsy	• Oculomotor nerve
	• Contralateral	• Red nucleus and

	hemiataxia and hemiasynergia	brachium conjunctivum
Parinaud's syndrome	• Bilateral vertical palsy	• Superior colliculus
	• Bilateral paralysis of convergence	• Superior colliculus

155. Absence seizures are seen in:

a) Grand mal epilepsy

b) Myoclonic epilepsy

c) Petitmal epilepsy

d) Hyperkinetic child

Correct Answer - C
Answer *is* C (Petitmal epilepsy):
Absence seizures are synonymous with Petitmal epilepsy

156. All of the following neurotransmitter deficiencies are observed in Alzheimer's disease, Except

a) Acetylcholine

b) Serotonine

c) Noradrenaline

d) Dopamine

Correct Answer - D
Answer is D (Dopamine):
Dopamine deficiency is not a feature of Alzheimer's disease.

157. All the following are features of Pseudotumor cerebri *except:*

a) Increased intracranial tension

b) Convulsions

c) Papilledema

d) Normal CT scan

Correct Answer - B
Answer is B (Convulsions):
There are no focal neurological signs in pseudotuntor cerebri. Therefore, Pseudotumor Cerebri does not present with convulsions. Seizures are produced due to focal neurological electrical abnormalities that may or may not involve the whole brain. In any case, these always start in a localized area of the brain.

158. Pick's body in pick's disease is:

a) Tau protein

b) Alpha synuclein

c) Beta synuclein

d) A amyloid

Correct Answer - A

Answer is A (Tau protein) :

Classic Pick's bodies stain positive with silver and tau-Harrison

Classification of Neuro degenerative disorders based on the major type of Protein Aggregations (inclusions)

Type of Protein Aggregate

Tau Protein (Tauopathies)

- *Pick's disease (Pick's bodies)*
- *Progressive supranuclear palsy (Tufted Astrocytes)*
- *Cortico basal degeneration (Astrocytic plaques)*
- *Familial Fronto temporal dementia and Parkinsonism linked to chromosome 17 (FTDP-17)*

Alpha Synuclein Protein (Synucleinopathies)

- Sporadic Parkinson's disease (Lewy bodies)
- Diffuse Lewy body disease (Lewy bodies)
- Multiple System Atrophy
  - ShyDrager syndrome
  - Striatonigral degeneration
  - Olivopontocerebellar atrophy

Facts to Remember :

Pick's bodies contain Tau protein Lewy bodies contain a synucleine

159. All are feature of Wernicke's encephalopathy, Except:

a) Cogwheel rigidity

b) Alteration in mental function

c) Ophthalmoplegia

d) Ataxia

Correct Answer - A

Answer is A (Cogwheel rigidity):

Wernicke's disease is seen in *Alcoholic*[Q] patients with *chronic thiamine deficiency*[Q].

The characteristic clinical triad is that of :

1. *Global confusion*
2. *Ophthalmoplegia*
3. Ataxia

160. Which of the following is a cause of reversible dementia?

a) Subacute combined degeneration.

b) Picks disease

c) Creutzfeldt – Jakob disease.

d) Alzheimer's disease

Correct Answer - A
Answer is A (Subacute combined degeneration)
`Subacute combined degeneration' is caused by vitamin B12 deficiency. Vitamin deficiencies including vitamin B,2 deficiency constitute potentially reversible causes of dementia.

161. Which of the following statements about Mollaret meningitis is true?

a) Caused by Herpes simplex 2 in most of the cases.

b) Is a recurrent, benign septic meningitis

c) Is also referred to as "Benign Recurrent Neutrophilic Meningitis"

d) Does not resolve without treatment

Correct Answer - A

Answer *is* A (Caused by Herpes simplex 2 in most of the cases):

Mollaret's Meningitis is a form of Self-limiting Benign Recurrent Aseptic Lymphocvtic Meningitis that is most commonly caused by HSV-2 infection of the CNS.

Several etiologies have been proposed for Mollaret's Meningitis however recent studies suggest that most cases of Mollaret's Meningitis result from Herpes Simplex Virus -2 (HSV-2) infection

Mollaret's Meningitis

- It is the name given to a Self-Limited Recurrent form of Aseptic Meningitis
- It is also referred to as Benign Recurrent Lymphocytic Meningitis
- Recurrent episodes (typically> 3 episodes) of meningismus and fever lasting for 2-5 days with spontaneous resolution is highly suggestive of a diagnosis of Mollaret's Meningitis
- CSF Examination is characterized by a cloudy spinal fluid with lymphocytic pleocytosis and normal glucose and protein.
- Presence of large granular cells on Papanicolaou's stain of the CSF called `Mollaret's Cells' is considered pathognomonic (Mollaret's cells were once thought to be endothelial cells but are now believed to be from the monocyte/ macrophage family)
- *Several etiologies. have been proposed for Mollaret's Meningitis*

however recent studies suggest that most cases of Mollaret Meningitis result from Herpes Simplex Virus -2 (HSV-2) infection Presence of HSV DNA on PCR is highly suggestive of Mollaret's Meningitis (In most cases HSV-2 DNA is detected

- It is not associated with genital herpetic lesions

162. Which of the following is the most common cause of meningoencephalitis in children:

a) Mumps

b) Arbovirus

c) HSV

d) Enterovirus

Correct Answer - D
Answer is D (Enterovirus):
Enteroviruses are the most common cause of viral meningoencephalitis.
Arboviruses, HSV and Mumps virus are all important agents associated with viral meningoencephalitis, but Enteroviruses are the most commonly associated agents and the answer of choice.
'Enteroviruses are the most common cause of viral meningoencephalitis' -

163. A 6 year old boy has been complaining of headache, ignoring to see the objects on the sides for four months. On examination, he is not mentally retarded, his grades at school are good, and visual acuity is diminished in both the eyes. Visual charting showed significant field defect. CT scan of the head showed suprasellar mass with calcification. Which of the following is the most probable diagnosis?

a) Astrocytoma

b) Craniopharyngioma

c) Pituitary adenoma

d) Meningioma

Correct Answer - B
Answer is B (Craniopharygioma):
Presence of headache, visual field defects and suprasellar calcification suggests a diagnosis of suprasellar neoplastic lesions. The most common suprasellar neoplastic lesion in children (6 years) associated with suprasellar calcification is craniopharyngioma which is the single best answer of choice.

164. All the following are true of Craniopharyngioma *except*

a) Derived from Rathke's pouch

b) Contains epithelial cells

c) Present in sella or infra-sellar location

d) Causes visual disturbances

Correct Answer - C

Answer is C (Present in sella or infrasellar location):

Some of these lesions arise from the sella, but most are suprasellar Q *(Not infra-sellar). They arise from near the pituitary stalk and commonly extend into the supra sellar cistern.*

- *Craniopharyngiomas arise from Rathke's pouch* and constitute 3-5% of all intracranial neoplasms.
- *Some of these lesions arise from the sella, but most are suprasellar* Q *(Not infra-sellar).* They arise from near the pituitary stalk and commonly extend into the supra sellar cistern.
- Consists of nests of cords of stratified squamous or columnar epithelium embedded in a spongy reticulum — *Robbins 61h/1129*
- Visual complaints are the presenting feature in about 80% of adults and 60% of children.

165. Which of the following is the most common false localizing neurological sign in assessing brain tumors

a) Seizures

b) Unilateral papilloedema

c) Abnormal unilateral pupil

d) Diplopia

Correct Answer - D
Answer is D (Diplopia):
Sixth Nerve Palsy (Abducent; Lateral Rectus) producing double vision (diplopia) is the most common false localizing sign because of its long intracranial course.
'A right sided brain tumor can produce either a right sided or a left sided sixth nerve palsy as an initial sign. Thus left sided sixth nerve palsy in a right-sided brain tumor represents the infamous false localizing sign'.
The most common false localizing sign is a sixth nerve palsy (diplopia). The nerve is particularly vulnerable because of its long course' - Merritt's Neurology
Brain Tumors

Generalized features

(Non-Localizing signs) Generalized symptoms like headache (most common generalized sign), nausea, vomiting, vertigo, dizziness and non specific mental and cognitive abnormalities represent generalized features of brain tumors that do not help localize the tumor to a particular part of brain.
Localizing /Focal signs

- The presence of a tumor impairs the function of the part of the brain where it resides
- The nature of evolving focal neurological defecit / focal seizures serves as localizing signs for tumors in various parts of brain
- *Unilateral papillaedema, abnormal unilateral pupil, specific aphasia, agnosias etc. can localize the tumor to a particular part of the brain.*

False Localizing Signs

- Neurological signs that reflect dysfunction, distant from the actual part of the brain involved arc called *False localizing signs*
- *·False localizing signs are generally produced from raised ICT and/or shift and compression of brain remote from the primary site.*
- *The most common false localizing sign is sixth nerve palsy (Lateral Rectus Palsy producing Diplopia).* The sixth CN is especially vulnerable because of its long intracranial course.

False Localizing signs (Brain tumors causing Raised ICT are known to produce false localizing signs)

.. Sixth Nerve Palsy (Lateral pectus palsy) producing diplopia is the most common false localizing sign produced by compression of the abducent nerve as it passes over the petrous ridge.

2. Ventricular dilation above midlinc in CSF obstructive lesions or posterior fossa lesions may produce false localizing signs

- *Intellectual and Behavioral changes suggestive of primary frontal pathology*
- *An interference with vertical eye movement (impaired up-gaze) which are programmed in the upper midbrain because of the dilation of posterior part of 3rd ventricle and aqueduct*

.. Ipsilateral hcmiparesis may represent a false localizing sign when a herniating uncus compresses the contralateral cerebral peduncle against the tentorium.

2. Cortical blindness or hemianopia may occur from compression of posterior cerebral arteries with occipital infarction from herniation through the tentorial notch.

3. Tinnitus may present as a false localizing sign as this may result from raised ICP of any cause.

4. Hydrocephalus may lead to presonality changes, gait abnormalities and urinary incontinence suggesting false localizing signs.

166. Foster Kennedy syndrome is classically described inassociation with:

a) Craniopharyngioma

b) Pituitary adenoma

c) Olfactory groove meningioma.

d) Medulloblastoma

Correct Answer - C
Answer is C (Olfactory groove meningioma):
Foster Kennedy syndrome is typically described in association with olfactory groove meningioma.
The Foster Kennedy syndrome consisting of anosmia accompanied by unilateral ipsilateral optic atrophy and contralateral papilledema may be caused by any large baso-frontal or orbito-frontal tumors. It has typically been associated with olfactory groove or sphenoid ridge masses especially meningiomas and has classically been described in patients with olfactory groove meningiomas.

167. Foster Kennedy syndrome is associated with all(o\fBtLh)e following, except:

a) Ipsilateral Anosmia

b) Contralateral Optic Atrophy

c) Olfactory groove meningioma

d) Contralateral Papilloedema

Correct Answer - B
Answer is B (Contralateral optic Atrophy):
Foster Kennedy Syndrome is associated with ipsilateral optic atrophy and not contralateral optic atrophy
The Foster Kennedy syndrome consists of ipsilateral anosmia, ipsilateral optic atrophy and contralateral papilledema

168. All of the following are associated with Autonomic Neuropathies, Except

a) Diabetes

b) Amyloid

c) Hyperthyroidism

d) Botulinism

Correct Answer - C

Answer is C (Hyperthyroidism):

Hyperthyroidism is not associated with an autonomic neuropathy. Thyroid Hormones interact with the sympathetic branch of the autonomic nervous system and stimulate /simulate increased activity of sympathetic nervous system. Hyperthyroidism however is not associated with an autonomic neuropathy.

Autonomic Neuropathies

Acute / Subacute Autonomic Neuropathies	**Chronic Peripheral Autonomic Neuropathies**
Subacute autoimmune autonomic ganglionopathy (AAG)	I Distal small fiber neuropathy
Subacute paraneoplastic autonomic neuropathy	2. Combined sympathetic and parasympathetic failure
Guillain-Barre syndrome	*a) Atnyloid*
Botulism	*b) Diabetic autonomic neuropathy*
Porphyria	*c) Autoimmune autonomic ganglionopathy*
Drug induced autonomic	*(Paraneoplastic and*

neuropathies-stimulants, drug withdrawal, vasoconstrictor, vasodilators, beta-receptor antagonists, beta-agonists

Toxic autonomic neuropathies

Subacute cholinergic neuropathy

idiopathic)

Sensory neuronopathy with autonomic failure

d) *Familial dysautonomia*

e) *(Riley-Day syndrome)*

I) Diabetic, uremic, or nutritional deficiency

g) *Dysautonomia of old age*

169. Tic Douloureux is facial pain traveling through which of the following nerves?

a) Facial

b) Hypoglossal

c) Trigeminal

d) Vestibulocochlear

Correct Answer - C
Answer is C (Trigeminal nerve):
Tic Douloureux refers to the association of Hemifacial spasm with Trigeminal Neuralgia (Trigeminal nerve) Trigeminal neuralgia (TN, or TGN), also known as Prosopalgia, Fothergill's disease or formerly 'Suicide disease' is a neuropathic disorder characterized by episodes of intense pain in the face, originating from the trigeminal nerve. Pain is typicall^{y} limited to the distribution of one or more divisions of the trigeminal nerve The pain often evokes spasm of the muscle of the face on the affected side. The clinical association between Trigeminal Neuralgia and hemifacial spasm is called Tic Douloureux.

170. All of the following statements about Trigeminal Neuralgia are true Except:

a) Most commonly involves Ophthalmic Division (V3) of Maxillary Nerve

b) Attacks most commonly occur during the day

c) Affects women more than men

d) More common on the Right Side

Correct Answer - A

Answer is A (Most commonly involves Ophthalmic Division (V3) of Maxillary Nerve):

The most common division of the trigeminal nerve involved in trigeminal neuralgia is the Maxillary division (V2) followed by the mandibular division (V3). The maxillary division (V2) is the most common site ofpain either alone or in combination with the mandibular division (V3). The ophthalmic Division (VI) is rarely involved (<5%). Pain arising from the maxillary division is usually referred to the upper lip nose and cheek while the pain arising from the mandibular division is often referred to the lower lip.

Features of Trigeminal Neuralgia

- The most common division of the trigeminal nerve involved in trigeminal neuralgia is the Maxillary division (V2)
- More common with advancing age
- More common in women
- More common on right side
- Attacks are most frequent during the day (but may awaken the patient at night)

171. Acute onset of blurred vision and absent pupillary response with rapidly progressive descending muscular weakness manifesting as quadriparesis in an afebrile 20 year old male with preserved sensorium is

a) Porphyria

b) Botulism

c) Polio

d) Diphtheria

Correct Answer - B

Answer is B (Botulism):

Sudden onset of blurred vision, absent pupillary reflexes (fixed /dilated pupil with lack of accomodation), symmetric descending paralysis progressing to qudriparesis and preserved sensorium suggest a diagnosis of Botulism.

Cardinal Feature of Botulism

- Cranial Nerve Palsies with prominent bulbar palsy (4 'D's of Bulbar Palsy)
  (Diplopia, Dysarthria, Dysphonia, Dysphagia, Ptosis, Loss of Accomodation, Fixed / Dilated pupils)
- Descending motor paralysis
  (Extent of paralysis from a few cranial nerves only to quadriperesis depends on dose of toxin)
- Symmetry of symptoms/signs
- A clear sensorium

- Absence of fever
- Lack of sensory findings

172. Thymomas may be associated with all of the following, Except

a) Myaesthania Gravis

b) Hypergammaglobulinemia

c) Panhypopituitarism

d) SLE

Correct Answer - B

Answer is B (Hypergammaglobulinemia):

Thymoms may he associated with Hypogammaglobulinemia and not with Hypergammaglobulinemia.

Thymoma is associated with Hypogammaglobulinemia and not with hypergammaglobulinemia

Immune status with Thymoma

- T-cell number & cell medicated immunity are usually intact *Q*
- These patients are very *deficient in circulating B lymphocytes*^{Q} *&* pre B cell in the bone marrow *Hypogammaglobulinemia*^{Q} usually occurs relatively late in adult life.
- Bacterial infection & diarrhea usually reflect this antibody deficiency.Q
- Frequently have *eosinopeniaQ*
- May develop *Red cell (Erythroid) Aplasia.Q*

173. Duchenne Muscular Dystrophy is a disease of:

a) Neuromuscular junction

b) Sarcolemmal proteins

c) Muscle contractile proteins

d) Disuse atrophy due to muscle weakness

Correct Answer - B

Answer is B (Sarcolemmal protein) :

Duchenne muscular dystrophy is caused kr *a mutation in the gene responsible few producing dystrophin.*

Dystrophin is `subsarcolemmal protein' (Nelson) localized to the inner surface of the sarcolemma of the muscle fibre. Harrison 17th/2683

Dystrophin is part of Dystrophin – Glycoprotein sarcolemmal complex and this protein deficiency leads to secondary loss of sarcoglycans and dystroglycans resulting in weakness of sarcolemma, causing membrane tears and muscle fibre necrosis

Duchenne muscular dystrophy: Review (pseudohypertrophic muscular dystrophy)

- Duchenne muscular dystrophy is the most common hereditary neuromuscular disease affecting all races and ethnic groups.
- Inheritance : X linked recessive
- Presentation occurs between ages 3 and 5 [disorder does not present at birth or in infancy^{Q}]

Clinical manifestations:

- Gower's sign is positive°
- Pseudohypertrophy of calf is seen° (muscle is replaced by fat & connective tissue)

- Loss of muscle strength is progressive. *2*
- Proximal muscles and neck flexors are involved more. *2*
- Leg involvement is more severe than arm involvement.
- Contractures of heel cords and iliotibial band occurs (by age of 6 years)
- Progressive scoliosis develops.

Complications:

Chest deformity[Q] (scoliosis) *:* Impairs pulmonary function°

By age of 16 and 18 years patients are predisposed to serious pulmonary fatal infections.

Cardiac:

Cardiomyopathy and CHF may be seen

Cardiac cause of death is uncommon

Intellectual impairment :

is common° (IQ is one SD below the mean)

Remember:

Onset [2]	*Before age of 5 2*
Confined to wheel chair	*After age of 12 e*
Inability to walk	
Respiratory failure	*In second or third decade (after 16-18 years)2*

Laboratory diagnosis:

- *Serum creatinephosphokinase (CK)[Q] :* elevated (20-100 times)
- *EMG :* features of myopathy

Muscle biopsy[Q] :

- Definitive diagnosis established on basis of dystrophin deficiency in biopsied muscle tissue -

Groups of necrotic and regenerating muscle fibres are seen.

Treatment:

- Glucocorticoids (Prednisolone) have been tried.
- Significant alteration in the progression of disease has been seen with **prednisolone.**

174. Burst – suppression EEG pattern is seen in all of the following, Except?

a) Hypoxic ischemic encephalopathy

b) Phenobarbital administration to lower ICP in traumatic brain injury

c) Severe Hypothermia

d) Creutzfeldt Jacob disease

Correct Answer - D
Answer is D (Creutzfeldt Jakob disease):
Creutzfeldt Jakob disease is associated with periodic sharp wave complexes of a frequency of about 1/second. CJD is typically not associated with Burst suppression pattern on EEG.

175. Dressler's syndrome is due to:
March 2005

a) Cor pulmonale

b) Mitral stenosis

c) Myocardial infarction

d) Pulmoonary embolism

Correct Answer - C
Ans. C: Myocardial infarction
It occurs following transmural infarction or open heart surgery.
Believed to have immunologic cause-Possibly a latent viral infection may be involved in cause. Clinical-Symptoms typically appear 2-3 weeks following infarct/surgery.

- May last for weeks or months
- Pleuritic chest pain (91%)
- Fever
- Pericardial and pleural effusion
- Pericardial friction rub
- Effusions can be bloody and cause tamponade

Imaging Findings:

- Pleural effusions (83%)
- Parenchymal opacities (74%)
- Enlarged cardiac silhouette from pericardial effusion (49%)

176. Pulsus bisferiens occurs in:
September 2005

a) HOCM

b) AR

c) AS and AR

d) All of the above

Correct Answer - D
Ans. D: All of the above
Pulsus bisferiens/ bisferious pulse / biphasic pulse
Bisferious means striking twice, traditionally pulsus bisferiens is discovered when aortic insufficiency exists in association with aortic stenosis, but may also be found in isolated but severe aortic insufficiency, and hypertrophic obstructive cardiomyopathy.

177. Most common feature of essential hypertension:
September 2005

a) Visual disturbances

b) Headache

c) Palpitations

d) Dizziness

Correct Answer - B
Ans. B: Headache
Many patients with essential hypertension report that they can determine when their blood pressure is elevated. Often, their perception of experiencing high blood pressure is accompanied by vague complaints of headache, fatigue, dizziness, sweating, a pounding heart, or nose-bleeds. - Of all these symptoms, headache is the commonest complaint.It is localized to the occipital region and occurs in the morning.

178. Pulsus alternans is seen in:
March 2009

a) MS with MR

b) AS with AR

c) Left ventricular failure

d) Digitalis poisoning

Correct Answer - C
Ans. C: Left ventricular failure
Pulsus alternans is a physical finding characterized by a regular alternation of the force of the arterial pulse. It almost invariably indicates the presence of severe left ventricular systolic dysfunction.

179. True regarding light microscopy changes in minimal change disease:
March 2004

a) Loss of foot process

b) Anti-Glomerular basement membrane antibodies seen

c) IgA deposits

d) No change seen

Correct Answer - D
Ans. D i.e. No change seen

180. Renal artery stenosis is not associated with:
March 2009

a) Marfan's syndrome

b) atherosclerosis

c) polyarteritis nodosa

d) takayasu arteritis

Correct Answer - A
Ans. A: Marfan's syndrome
The most common cause of renal artery stenosis is an **atheromatous plaque**.
Marfan Syndrome:

- Marfan syndrome (MFS) is a spectrum of disorders caused by a heritable genetic defect of connective tissue that has an autosomal dominant mode of transmission.
- The defect itself has been isolated to the FBN1 gene on chromosome 15, which codes for the connective tissue protein fibrillin. Abnormalities in this protein cause a myriad of distinct clinical problems, of which the musculoskeletal, cardiac, and ocular system problems predominate.
- The skeleton of patients with MFS typically displays multiple deformities including arachnodactyly (ie, abnormally long and thin digits), dolichostenomelia (ie, long limbs relative to trunk length), pectus deformities (ie, pectus excavatum and pectus carinatum), and thoracolumbar scoliosis.
- Finally, blindness may result from unrecognized and untreated glaucoma, retinal detachment, and cataracts.

- In the cardiovascular system, aortic dilatation, aortic regurgitation, and aneurysms are the most worrisome clinical findings. Mitral valve prolapse that requires valve replacement can occur as well.
- Ocular findings include myopia, cataracts, retinal detachment, and superior dislocation of the lens.

  Takayasu arteritis is also known as pulseless disease because of frequent occlusion of arteries arising from the aorta.It may also occlude renal arteries.

  Polyarteritis nodosa is a multisystem necrtizing vasculitis of small and medium sized muscular arteries in which involvement of the renal and visceral arteries is characteristic.There is fibrinoid necrosis with compromise of the lumen.

181. Post exposure prophylaxis [PEP] for HIV should be given for a minimum period of:

March 2005

a) 4 weeks

b) 6 weeks

c) 8 weeks

d) 10 weeks

Correct Answer - A

Ans. A: 4 weeks

PEP should normally be continued for 4 weeks. This time course, or the drugs used may need to be modified if problems of tolerance and/or toxicity are encountered .Since nausea is a common problem, the prescription of prophylactic anti-emetics should be considered. Anti-motility drugs may be helpful if diarrhoea develops - a common side effect of nelfinavir. A combination of two nucleoside analogue reverse transcriptase inhibitors for less severe exposures and combination of two nucleoside analogue reverse transcriptase inhibitors and a 3rd drug for severe exposures.

182. All of the following are features of hyperthyroidism except: *September 2007*

a) Rise in BMR

b) Delayed deep tendon reflexes

c) Weight loss

d) Moist skin

Correct Answer - B

Ans. B: Delayed deep tendon reflexes

Features of hyperthyroidism

- Increased heat production - warm, moist skin, heat intolerance
- Telangiectasia, palmar erythema, pretibial myxoedema, onycholysis
- Weight loss, increased appetite, increased frequency of bowel movement but frank diarrhoea is uncommon.
- Oligomenorrhoea
- Tachycardia, exertional dyspnoea, hyperdynamic circulation; systolic hypertension is common and diastolic
- hypertension can occur in up to 30% of patients
- Tiredness, irritability, nervousness
- Fine tremor, hyperkinesias, hyperreflexia, muscle wasting
- There are eye signs in Graves' disease

Others:

- Occasionally, bone pain due to osteoporosis
- In elderly patients, there may be atrial fibrillation or cardiac failure
- Alopecia, pruritus, pretibial myxoedema, acropachy (form of clubbing)

Atypical presentation may include:

- Atrial arrhythmias in middle aged patients
- Severe proximal myopathy with normal CK values
- Deterioration or unmasking of myasthenia gravis
- Hypokalaemic periodic paralysis - especially in orientals
- Chronic diarrhoea
- Hypercalcaemia
- Osteoporosis
- Gynaecomastia

183. Normal anionic gap is seen in:
March 2009

a) Lactic acidosis

b) Diarrhea

c) Ketoacidosis

d) Methanol poisoningo

Correct Answer - B
Ans. B: Diarrhea

184. The ECG in hyperkalemia classically shows:
September 2009, 2010

a) Increase QRS duration

b) Shortened PR interval

c) Prominent U waves

d) Increased R wave amplitude

Correct Answer - A
Ans. A: Increase QRS duration

185. Characteristic of Guillain-Barre syndrome is:
September 2005

a) Profouund sensory loss

b) Loss of limb reflex

c) Residual paralysis

d) Descending paralysis

Correct Answer - B
Ans. B: Loss of limb reflex

186. Which of the following is NOT seen in ARDS:
March 2013

a) Pulmonary edema

b) Hypercapnia

c) Hypoxemia

d) Stiff lung

Correct Answer - B

Ans. B i.e. Hypercapnia

ARDS/ Diffuse alveolar damage/ Shock lung

- Hypoxia,
- Hypocapnia,
- Acute onset of respiratory failure,
- Ground glass appearance on chest X-ray
- Air bronchogram sign is positive
- Associated with:

Pancreatitis,

- Trauma,
- Multiple blood transfusions etc.

187. Hypercapnia is NOT seen in:
March 2013

a) Severe asthma

b) Anaphylaxis

c) Inhalational burn injury

d) ARDS

Correct Answer - D
Ans. D i.e. ARDS

188. Characteristic of mixed connective-tissue disease [MCTD] are all of the following except:
March 2005

a) Hypogammaglobulinemia

b) Membranous glomerulonephritis

c) Polyarthritis

d) CNS involvement

Correct Answer - A

Ans. A: Hypogammaglobulinemia

Manifestations of mixed connective-tissue disease (MCTD) can be variable. Most patients experience Raynaud phenomenon, arthralgia/arthritis, swollen hands, sclerodactyly or acrosclerosis, and mild myositis. The following may be revealed by history or physical examination:

- Raynaud phenomenon
- Arthralgia/ arthritis
- Esophageal hypomotility
- Pulmonary dysfunction
- Swollen hands
- Myositis
- Rash
- Leukopenia
- Sclerodactyly
- Pleuritis/ pericarditis
- Pulmonary hypertension
- Membranous glomerulonephritis

Lab investigations shows features of inflammation with elevated ESR and hypergammaglobulinemia

189. All of the following are associated with polyuria except:
September 2007

a) Diabetes insipidus

b) Diabetes mellitus

c) Rapidly progressive glomerulonephritis

d) Rapidly progressive glomerulonephritis

Correct Answer - C

Ans. C: Rapidly progressive glomerulonephritis

Polyuria is said to occur if a patient passess more than 3 litres of urine per day. Causes of polyuria

Endocrine:

- Diabetes mellitus
- Cranial diabetes insipidus
- Cushings syndrome

Renal:

Relief of chronic urinary obstruction

- Early chronic pyelonephritis
- Nephrogenic diabetes insipidus
- syndrome

Iatrogenic:

- Diuretic therapy
- Alcohol

Other drugs, e.g. lithium, tetracyclines

Metabolic:

– Hypercalcemia

– Primary hyperaldosteronism

Psychological:

– Psychogenic polydipsia (compulsive water-drinking)

– Polyuria is an uncommon but serious complication of psychotic illness

Rapidly progressive glomerulonephritis may cause anuria

190. 55yr old man with dementia was given a natural alkaloid which of the following?

a) Tacrine

b) Donepezil

c) Galantamine

d) Rivastigmine

Correct Answer - C
Ans. is 'c' i.e., Galantamine

191. Whick metabolic derangement is seen in pregnancy

a) Metabolic acidosis

b) Metabolic alkalosis

c) Respiratory acidosis

d) Respiratory alkalosis

Correct Answer - D

Ans. is `d' i.e., Respiratory Alkalosis

- *Hyperventilation in pregnancy will lead to respiratory alkalosis.*
- *The hyperventilation that occur during pregnancy is probably due in part to progesterone stimulating the centre.*
- *Lung volume changes and altered compliance may also contribute.*
- *The effect is a chronic respiratory alkalosis which is compensated by renal excretion of bicarbonate.*

Typical ABG in the third tirmesters

*p*H → *7.43*

PCO_2 → *33 mmHg*

CO; → *21 mmHg*

PO2 → *104 mmHg*

192. Chronic hemodialysis in ESRD patient is done

a) Once per week

b) Twice per week

c) Thrice per week

d) Daily

Correct Answer - C
Ans. is 'c' i.e., Thrice per week

- For the majority of patients with ESRD, between 9 and 12 h of dialysis are required each week, usually divided into three equal sessions.
- Current targets of hemodialvsis
- Urea reduction ratio (the fractional reduction in blood urea nitrogen per hemodialysis session) of > 65-70%.
- Body water-indexed clearance x time product (KT/V) above 1.2 or 1.05.

193. Good syndrome is

a) Thymoma with immunodeficiency

b) Thymoma with M. Gravis

c) Thymoma with serum sickness

d) Thymoma with pure red cell aplasia

Correct Answer - A

Ans. is 'a' i.e., Thymoma with immunodeficiency

- Good's syndrome (thymoma with immunodeficiency) is a rare cause of combined B and T cell immunodeficiency in adults.

Clinical features of Good's syndrome are :-

- Increased susceptibility to bacterial infections with encapsulated organisms and opportunistic viral and fungal infection.

***The most consistent immunological abnormalities are** :-*

- Hypogammaglobulinaemia and
- *Reduced or absent B cells*

Treatment

- Resection of the thymoma and immunoglobulin replacement to maintain adequate through Ig*G values*

194. Not associated with diabetes mellitus

a) Cushing syndrome

b) Acromegaly

c) Hypothyroidism

d) Pheochromocytoma

Correct Answer - C
Ans. is 'c' i.e., Hypothyroidism

195. Menke's disease" is a disease of

a) Impaired zinc transport

b) Impaired copper transport

c) Impaired magnesium transport

d) Impaired molybdenum transport

Correct Answer - B

Ans. is 'b' i.e., Impaired copper transport

Menke's disease is caused due to defect in the copper transport.

- *There is defect in the transport of copper present in the intestinal mucosa to the blood stream.*
- The mucosal lining of intestine contains high level of copper bound to metallothionein protein.
- Rath*er than being transporated to bloodstream, the copper remained in the mucosa and was lost when intestinal cells were naturally soughed off.*

Menkes disease is caused due to defect in the "MNK" gene.

- *The protein normally function by moving copper from the intestinal mucosal cells into the blood stream, where it is hound by proteins such as albumin and transported to organs and tissues.*

Serum copper is critical for the functioning of several enzymes

Lysyl oxidase → It is important for the cross linking of collagen and elastin such that deficiencies lead to problems in connective tissues such as bones

Cytochrome oxidase → Involved in temperature maintenance

Tyrosinase → *Necessary for pigmentation*

Clinical features of menkes disease

- Growth retardation

- *Coarse hair, brittle and ivory white (result of depigmentations). The hair fibres are twiisted and broken helically (kinky hair).*
- Seizures
- *Cerebral and cerebellar degeneration (postmortem analysis)*
- Hypothermia
- *Thrombosis*
- Poor bone development
- Increased tendency towards aneurysms

196. Anosmia is early clinical feature of

a) Alzheimer

b) Parkinson's disease

c) Huntington's chorea

d) All of the above

Correct Answer - D
Ans. is 'd' i.e., All of the above
Main causes of anosmia

- Main causes of anosmia
- Nasal.
- Smoking.
- Chronic rhinitis (allergic, atrophic, cocaine, infectious-Herpes, influenza).
- Overuse of nasal vasoconstrictors.
- Olfactory epithelium.
- Head injury with tearing of olfactory filaments
- Cranial surgery.
- Subarachnoid hemorrhage, meningitis.
- Toxic (organic solvents, certain antibiotics-am inoglycosides, tetracyclines, corticosteroids, methotrexate,
- opiates, 1-dopa).
- Metabolic (thiamine deficiency, adrenal and thyroid deficiency, cirrhosis, renal failure, menses).
- Wegener granulomatosis.
- Compressive and infiltrative lesions (craniopharyngioma, meningioma, aneurysm, meningoencephalocele).
- Degenerative disease (Parkinson, Alzheimer, Huntington
- Temporal lobe epilepsy.

- Malingering and hysteria

197. Blood transfusion should be completed within hours of initiation

a) 1- 4 hours

b) 3- 6 hours

c) 4- 8 hours

d) 8- 12 hours

Correct Answer - A
Ans. is 'a' i.e., 1-4 hours

198. DOC for Tourette syndrome

a) Haloperidol

b) Valproate

c) B complex

d) Clonidine

Correct Answer - D
Ans. is 'd' i.e., Clonidine

- Earlier Haloperidol was considered as DOC for Tourette syndrome.
- Clonidine is considered as DOC for Tourette syndrome

Treatment

There's no cure for Tourette syndrome. Treatment is aimed at controlling tics that interfere with everyday activities and functioning. When tics aren't severe, treatment might not be necessary.

Medication

- **Medications that block or lessen dopamine.** Fluphenazine, haloperidol (Haldol), risperidone (Risperdal) and pimozide (Orap) can help control tics.
- **Botulinum (Botox) injections**
- **Central adrenergic inhibitors.** Medications such as clonidine (Catapres, Kapvay) and guanfacine (Intuniv) — typically prescribed for high blood pressure — might help control behavioral symptoms such as impulse control problems and rage attacks.
- **Antidepressants.** Fluoxetine (Prozac, Sarafem, others)
- **Antiseizure medications.**

Therapy

- **Behavior therapy.** Cognitive Behavioral Interventions for Tics, including habit-reversal training, can help you monitor tics, identify premonitory urges and learn to voluntarily move in a way that's incompatible with the tic.
- **Psychotherapy.** In addition to helping you cope with Tourette syndrome, psychotherapy can help with accompanying problems, such as ADHD, obsessions, depression or anxiety.
- **Deep brain stimulation (DBS).** For severe tics that don't respond to other treatment, DBS might help. DBS involves implanting a battery-operated medical device in the brain to deliver electrical stimulation to targeted areas that control movement.

199. SSPE is not diagnosed by

a) EEG

b) Antibodies to measles in CSF

c) Antibodies to measles in blood

d) Antigen in brain biopsy

Correct Answer - A
Ans. is 'a' i.e., Tuberculosis
Bronchiectasis Sicca or Dry Bronchiectasis is typically associated with Tuberculosis.

- Tuberculosis is associted with a type of dry bronchiectasis called Bronchiectasis Sicca, which is predominantly seen in upper lobes.
- Dry Bronchiectasis (Bronchiectasis Sicca) is typically characterized by absence of copious amount of sputum which is usually a hall mark of bronchiectasis.
- Dry cough associated with hemoptysis is the typical presentation

200. Central bronchiectasis is seen with

a) Cystic Adenomatoid Malformation

b) Cystic fibrosis

c) Broncho carcinoma

d) Tuberculosis

Correct Answer - B
Ans. is'b' i.e., Cystic fibrosis
The distribution ()I- bronchiectasis mar be important diagnostically
A central → *Perihilar allergic bronchopulmonary aspergillosis.*
Predominant upper lobe o Middle and lower lobe → *Cystic fibrosis or one of its variants. Distribution is consistent with PCD*
Lower lobe involvement is → Middle lobe and lingular segment of the LUL involvement is characteristic of non tuberculous mycobacteria (NTM). Idiopathic bronchiectasis

201. Most common inherited bleeding disorder:

a) Von wilebrand disease

b) Bernard soulier

c) Glanzmann thrombasthenia

d) ITP acute

Correct Answer - A
Ans. is 'a' i.e., Von Wilebrand disease

- Von it illebrand disease (vWD) is the most common inherited bleeding disorder.
- It is autosomal dominant, and its pr*evalence is estimated to be as high as 1 case per 1000 population*

202. Obstructive sleep apnoea may result in all of thefollowing except

a) Systemic hypertension

b) Pulmonary hypertension

c) Cardiac arrhythmia

d) Impotence

Correct Answer - C
Ans. is 'c' i.e., Cardiac arrhythmia

Daytime function and cognition

- *OSA is associated with excessive daytime sleepiness, inattention, and fatigue, which may impair daily function, induce or exacerbate cognitive deficits, and increase the likelihood of errors and accidents.*

Cardiovascular morbidity

- Patients wi*th OSA, are at increased risk for a broad range of cardiovascular morbidities, including systemic hypertension, pulmonary arterial hypertension, coronary artery disease, cardiac arrhythmias, heart failure, and stroke.*

Metabolic syndrome and type 2 diabetes

- Patients with OSA have an increased prevalence of insulin resistance and type 2 diabetes.

Nonalcoholic fatty liver disease

- Intermittent nocturnal hypoxia due to OSA may contribute to the development and severity of nonalcoholic fatty liver disease (NAFLD), independent of shared risk factors such as obesity.

Perioperative complications

- Patients with OSA may be at greater risk for perioperative complications such as postoperative oxygen desaturation, acute

respiratory failure, postoperative cardiac events, and intensive care unit transfers.

Mortality

- *Patients with untreated severe OSA (ie, AHI 30 events per hour) have a two- to three fold increased risk of all-cause mortality compared with individuals without OSA, indep*endent of other *risk factors such as obesity and cardiovascular disease.*

203. Most common heavy chain disease is

a) Franklin disease

b) Seligmann disease

c) Mu heavy chain disease

d) Waldenstrom cryoglobulinemia

Correct Answer - B
Ans. is 'b' i.e., Seligmann Disease (Alpha heavy chain disease)

204. Garland sign on CXR in sarcoidosis involves all except?

a) Right paratracheal nodes

b) Right hilar nodes

c) Left hilar nodes

d) Left pretracheal lymph nodes

Correct Answer - D
Ans. is 'd' i.e., Left pretracheal lymph nodes

- *Bilateral hilar lymphadenopathy with right paratracheal nodal enlargement is classic for sarcoidosis and is referred to as the 1-2-3 sign or Garland triad.*

Garland's triad (also known as the 1-2-3 sign or Pawnbrokers sign) of Sarcoidosis

- Right paratracheal nodes
- Right hilar nodes
- Left hilar nodes

205. Acute hyponatremia becomes symptomatic at

a) < 135 mEq

b) < 125 mEq

c) < 120 mEq

d) < 110 mEq

Correct Answer - B
Ans. is 'b' i.e., < 125 mEq
Serum level of sodium at which symptoms develop
Acute < 125 meq/L
Chronic < 120 meq/L

- Hyponatremia is commonly defined as a serum sodium < 135 mmol/L (< 135 mEq/L). Neurological symptoms
- occur at different levels of low sodium, depending not only on the absolute value but also on the rate of fall.
- In patients with hyponatremia that develops over hours, life-threatening seizures and cerebral edema may occur
- at values as high as 125 mmol/L.
- In contrast, some patients with more chronic hyponatremia that has slowly developed over months to years may be asymptomatic even with serum levels < 110 mmol.

Acute or hyperacute hyponatremia

- The hyponatremia developed within the previous 24 hours, it is called "acute."
- *If the* hyponatremia developed over just a few hours due to a marked increase in water intake (self-induced water intoxication, as may be seen in marathon runners, psychotic patients, and users of ecstasy), it is called "*hyperacute."*

Chronic hyponatremia

- If it is known that the hyponatremia has been presentfbr more than 48 hours, or if the duration is unknown (such as in patients who develop hyponatremia at home), it is called "chronic."

Mild to moderate hyponatremia

- Mild hyponatremia is usually defined as a serum sodium concentration between 130 and 135 meq/L.
- Moderate hyponatremia is often defined as a serum sodium concentration between 121 and 129 meq/L.

Severe hvponatremia

- Severe hyponatremia can be defined as a serum sodium of 120 meq/L or less.

Symptoms of hvponatremia

Absent symptoms

- Patients with hyponatremia are frequently asymptomatic, particularly if the hyponatremia is chronic and of mild or moderate severity (ie, serum sodium >120 meq/L).
- However, such patients may have subclinical impairments in mentation and gait.

Mild to moderate symptoms

- Mild to moderate symptoms of hyponatremia are relatively nonspecific and include headache, nausea, vomiting, fatigue, gait disturbances, and confusion.
- *In patients with chronic hyponatremia (ie, >48 hours duration), these findings are not associated with impending herniation; however, in patients with more acute hyponatremia, such symptoms should be considered ominous and may evolve without warning to seizures, respiratory arrest, and herniation.*

Severe symptoms

- Severe symptoms of hyponatremia include
- u Seizures
- Obtundation
- Coma
- Respiratory arrest.

206. Christmas tree appearance of urinary bladder is seen in

a) Neurogenic bladder

b) Stress incontinence

c) Autonomous bladder

d) Enuresis

Correct Answer - A
Ans. is 'a' i.e., Neurogenic bladder

- *Christmas tree appearance of the bladder is seen in neurogenic bladder caused by detrusor hyperreflexia.*
- *Detrusor hyperreflexia is caused by lesions of the spinal cord above the sacral segments but below the pons. Such patients have noperception of bladder filling or emptying and voluntary voiding is not possible.*
- *Voiding when it does occur is involuntary with simultaneous contractions of the detrusor and external sphincter muscles.*
- *Common neurological condition resulting in detrusor hyperreflexia include*
- *Multiple sclerosis*
- *Myelodysplasia,*
- *Spinal cord trauma*
- *Spinal cord tumours,*
- *A-V malformatio not the spinal cord*
- *Radiologically, patients with long terms untreated detrusor hyperreflaxia have characteristic changes of the urinary tact.*
- *Bladder is vertically oriented, with an irregular contours, consistent with trabeculation. There are frequently multipel diverticula, Such a bladder is referred to as a christmas tree.*

	Automatic bladder	Autonomous bladder
Lesion site	Above T5 or higher	Cauda equina damage / lower motero neuron
Manifestation	Small spastic bladder	damage Large flaccid bladder
Why this name	urge comes again and again due to repeated contractions and hence empties repeatedly after some time	Has no urge sensation and continuous DRIBBLING occurs, So it is like the bladder is working all the time but Brain has no control over it and hence called autonomous bladder
Radiological data	Christmas tree appearance	No VUR but still bladder is large and holds lots of residual urine

207. Which of the following is a quantitative defect in globin synthesis

a) Thalassemia

b) Sickle cell hemoglobinopathy

c) G6PD deficiency

d) Diamond-Black fan syndrome

Correct Answer - A
Ans. is 'a' i.e., Thalassemia
The thalassemia syndromes are a heterogeneous group of disorders caused by inherited mutations that decrease the synthesis of either the c-globin or p-globin chains that compose adult hemoglobin, HbA (c2p2), leading to anemia, tissue hypoxia, and red cell hemolysis related to the imbalance in globin chain synthesis.

208. The most common cause of embolic stroke

a) Non rheumatic atrial fibrillation

b) Carotid artery atherosclerosis

c) Paradoxical embolism

d) LV aneurysm

Correct Answer - A
Ans. is 'a' i.e., Non rheumatic atrial fibrillation

- No rheumatic atrial fibrillation leads to clot formation in left atrial appendage that can embolize to the brain leading to neurological dificits

209. Treatment of asymptomatic bradycardia is

a) No treatment is required

b) Give atropine

c) Isoprenaline

d) Cardiac pacing

Correct Answer - A
Ans. is 'a' i.e., No treatment is required

210. WPW syndrome is caused by

a) Bundle Branch Block

b) Right sided accessory pathway

c) Ectopic pacemaker in atrium

d) Left budle Branch block

Correct Answer - A
Ans. is 'b' i.e., Right sided accessory pathway
Anatomy (Location ofAccessory pathway) in W.R W syndrome

- Electrophysiological studies and mapping have shown that accessory. Atrioventricular pathways may be located anywhere along the A-V rign or groove in the septum.
- The most frequent locations are : -
- Left lateral (50%), posteroseptal (30%) right anteroseptal (10%).
- Right lateral (10%).
- Preexcitation resulting from left sided accessory is called type A preexcitation.
- Preexcitation resulting from right sided accessory pathway is called type B preexcitation.

211. Mauriac's syndrome is characterized by all except

a) Diabetes

b) Obesity

c) Dwarfism

d) Cardiomegaly

Correct Answer - D
Ans. is 'd' i.e., Cardiomegaly
Mauriac Sydrome

- Children with poorly controlled type I diabetes may develop Mauriac syndrome. It is characterized by : -
- Growth attenuation
- Delayed puberty
- Hepatomegaly
- Abnormal glycogen storage and steatosis
- Cushingoid features
- Rare in modern era of insuling therapy but is occasionlly reported.

212. Hemiplegia is most often caused by thrombosis of ?

a) Anteiror cerebral artery

b) Middle cerebral artery

c) Posterior cerebral artery

d) Basiliar artery

Correct Answer - B
Ans. is 'b' i.e., Middle cerebral artery
Middle Cerebral Artery

- Deep branches of the middle cerebral artery on the *lenticulostriate branches supply the internal capsule (posterior limb).*
- *Motor t*racts are densely packed in this region and hence occlusion of deep branches or lenticulostrials branches leads to Densse Hemiplegia/Pure motor Hemiplegia.
- Anterior choroidal artery supplies the posterior limb of internal capsule (and not anterior limb of internal capsule).
- Anterior chorodial artery arises from the internal carotid artery and supplies the posterior limb of internal capsule. The complete syndrome of anterior choroidal artery occlusion consists of contralateral hemiplegia hemianesthesia (hypoesthesia) and homonymous hemianopia

Posterior Cerebral Artery

- *The poste*rior cerebral artery supplies the midbrain, thalamus lateral geniculate bodies, posterior of chroid plexus, occipital lobes, inferior and medial aspect of the temporal lobe and posterior inferior areas of the parietal lobe

Occlusion of the Posterior Cerebral Artery usually results in two common clinical syndrome depending on the areas

involved	
P1 Syndrome	P2 Syndrome
Occlusion of the *proximal segment ofPCA from its origin to its union withthe posterior communicating artery*	Occlusion of the *distalsegment of PCA distal to the junction of PCA with theposterior communicating artery*
P1 syndrome present primarily withthe following signs	*P2 syndrome presents primarily withthe following signs*
Midbrain signs	*Temporal lobe signs*
Thalamic signs	Occipital *lobe signs*
Subthalamic signs	

213. About fibromyalgia all are true except

a) Associated with EEG abnormalitie

b) More common in males than females

c) Associated with low free cortisol levels

d) Associated with decreased blood flow to brain

Correct Answer - C
Ans. is 'b' i.e., More common in males than females
Fibromyalgia is more common in features.

- *It is* associated with disturbed sleep physiology.
- The sleep anomaly is alpha wave intrusion during NREM stage 4.

There are 5 main measurable neuroendocrine abnormalities are associated with dysfunction of the HPA axis seen in fibromyalgia. These include :-

- *L*ow free cortisol levels in 24-hour urine samples.
- Loss of the normal circadian rhythm, with an elevated evening cortisol level (when it should be at its lowest level).
- Insulin-induced hypoglycemia associated with an overproduction of ACTH.
- Low levels of growth hormone.
- Stimulated ACTH secretion leading to insufficient adrenal release of gluocorticoids

214. Most common cause of unilateral pedal edema

a) Pregnancy

b) Lymphedema

c) Venous insufficiency

d) Milroy disease

Correct Answer - C
Ans. is 'c' i.e., Venous insufficiency
<u>The most likely cause of leg edema in patients over age 50 is venous insufficiency.</u>

- Venous insufficiency affects up to 30% of the population, whereas heart failure affects only approximately 1%.
- The most important cause of unilateral pedal edema is venous insufficiency.

<u>Milroys disease</u> :

- The defect in Milroy's disease is present from birth and symptoms are usually first experienced in childhood.
- *The most common problem is one-sided leg swelling, unilateral edema, which is progressive and can affect both legs.*
- *Impaired intestinal lymphatics can cause steatorrhea due to impaired transport of chylomicrons*

215. Which of the following regarding small vessel disease (SVD), cerebral amyloid angiopathy (CAA) and Alzheimer's disease (AD) is not true?

a) SVD is related to CAA

b) SVD is not correlated to AD

c) SVD is related to AD

d) CAA is associated with AD

Correct Answer - C
Ans. c. SVD is related to AD
In dementia, both small vessel disease (SVD) and large vessel disease are found. But Alzheimer's disease is caused by involvement of large vessels, while subcortical dementia like progressive supranuclear palsy (PSP) involves small vessels."
"The term "small vessel" is used for small penetrating branches that arise at acute angles from the large arteries of circle of Willis, stem of the middle cerebral artery and the basilar artery. These arteries penetrate at right angles to supply the deeper structures within the brain e.g. basal ganglia, internal capsule, thalamus, pons. These arteries are prone to thrombosis and are common causes of ischemic stroke.
"With normal aging, there is also an accumulation of amyloid in cerebral blood vessels, leading to a condition called cerebral amyloid angiopathy (without dementia), which predisposes older persons to lobar hemorrhage and brain micro-hemorrhages (Small vessel disease). AD patients appear to be at increased risk for amyloid angiopathy, and this may explain some of the observed

association between AD and stroke."-
"Cerebral amyloid angiopathy (CAA), although usually asymptomatic, is an important cause of primary lobar intracerebral hemorrhage in the elderly. It can occur as a sporadic disorder, sometimes in association with AD, or as a certain familial syndrome. CAA is characterized by deposition of cognophilic material in small to medium-sized blood vessels of the brain and leptomeninges. In its most severe stages, the amyloid deposits cause breakdown of the blood vessel wall with resultant hemorrhage

216. Fever blisters can occur due to:

a) HHV-6

b) Varicella Zoster virus infection

c) Primary HSV-1 infection

d) Reactivation of HSV-1

Correct Answer - D
Ans. d. Reactivation of HSV-1

- Fever blisters can occur due to reactivation of HSV-1. Oral vesicular lesions of mouth (fever blisters, cold sores) are more commonly associated with recurrent injection than the primary infection.
- "The most common site of cutaneous herpes infection is the face-on the cheeks, chin, around the mouth or on the
- forehead. Lesions may also appear on the buttocks in infants as 'napkin rash'. The typical lesion is the 'fever blister' or herpes febrilis, caused by viral reactivation in febrile patients."
- ips are common, most patients develop prodromal symptoms about 24 hours before the appearance of painful lesions at the lip borders.

217. Which of the following is most likely to be affected in an anuerysm of posterior cerebral artery (PCA)?

a) Hypophysis cerebri

b) Trochlear nerve

c) Oculomotor nerve

d) Optic nerve

Correct Answer - C
Ans. c. Oculomotor nerve
(Ref Harrison 19/e p1784, 18/e p2262)

Oculomotor nerve is most likely to be affected in an aneurysm of *posterior cerebral artery (PCA).*
Occipital and posterior cervical pain may signal a posterior inferior cerebellar artery or anterior inferior cerebellar artery aneurysm. Pain in or behind the eye and in the low **temple can occur with an expanding MCA aneurysm."-** *Harrison I8/e p2262*

218. A 25-year-old female presented with history of recurrent abortions. The most relevant investigation to identify the cause is:

a) Bleeding time

b) Rothrombin time

c) Dilute russel viper venom test

d) Clot solubility test

Correct Answer - C

Ans. c. Dilute russet viper venom test

Recurrent abortions is one of the manifestations of antiphospholipid antibody syndrome. The most relevant investigation to identify antiphospholipid antibody syndrome is Dilute russet viper venom test.

Lupus Anticoagulant

- Lupus anticoagulants are acquired inhibitors directed against phospholipid binding proteins and are a common cause of APTT prolongation.Q
- Dilute Russel viper venom test is one of the tests to detect lupus anticoagulant.Q

In-vivo

- Lupus anticoagulant don't interfere with coagulation factor complex formation on the platelet surfaceQ
- Not usually associated with bleeding tendencyQ
- Frequently associated with thrombosisQ

In-vitro

- This prolongation results in paradoxical prolongation of phospholipid based clotting assays such as PTT, kaolin, clotting time and Dilute Russel viper venom antibody (dRWT testing)Q

219. Inability to perform physical activity without discomfort falls under

a) NYHA class 1

b) NYHA class 2

c) NYHA class 3

d) NYHA class 4

Correct Answer - D
Ans. d. NYHA class 4
Class IV Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort.
Symptoms of heart failure or the anginal syndrome may be present even at rest.
If any physical activity is undertaken, discomfort is increased

220. Which of the following statements is true about the bundle of kent?

a) Abnormal pathway between two atria

b) It is muscular or nodal pathway between the atria and ventricle in WPW syndrome

c) It is slower than the AV nodal pathway

d) None

Correct Answer - B

Answer. B. It is muscular or nodal pathway between the atria and ventricle in WPW syndrome

Explanation-

- The Wolff-Parkinson-White syndrome is defined by the combination of an atrioventricular pre-excitation (bundle of Kent) and paroxysmal supraventricular tachycardias. The diagnosis of atrioventricular pre-excitation in sinus rhythm is established on the association between a short PR interval, a wide QRS, a delta wave, a normal terminal QRS portion and frequent repolarization disorders.

221. A female patient has TSH elevated above normal and subnormal free T4. What is the likely diagnosis?

a) Primary hypothyroidism

b) Secondary hypothyroidism

c) Hyperthyroidism

d) Subclinical hypothyroidism

Correct Answer - A
Answer- A. Primary hypothyroidism
Elevated TSH with decreased T3/74 in the patient is suggestive of primary hypothyroidism"

222. CURB-65 score includes all except:

a) Age > 65 years

b) Confusion and elevated blood urea nitrogen > 7 mmol/L

c) Respiratory rate > 30/min

d) Systolic BP < 100 mm Hg and Diastolic BP < 60 mill Hg

Correct Answer - D

Answer- D. Systolic BP < 100 mm Hg and Diastolic BP < 60 mill Hg

Pneumonia Severily Index (PSI) and CUR8-65 criteria ure used in patients of community-acquired pneumonia to decide severity of illness and which patients merit in-patient/ICU care. Systolic BP of <90 mm Hg (not < 100 mm Hg) is a part of the CURB65 criteria.

223. A 50 years old male patient with weight 65 kg, pH 7.05, PCO, 15 mmHg, HCO3 5 mEq/L and base excess/ deficit -40 mEq/L. How much sodium bicarbonate has to be given in first 4 hour

a) 150 mEq

b) 300 mEq

c) 450 mEq

d) 600 mEq

Correct Answer - A
Answer- A. 150 mEq

224. A 40 years old female is came in the department by describing "1 have worst headache of my life". The investigation of choice for this patient

a) Four vessels carotid angiography

b) Computed tomography (CT)

c) MRI

d) No scan is required

Correct Answer - B

Answer- B. Computed tomography (CT)

It is a case of "acute subarachnoid hemorrhage".

- The explosive onset of severe, excruciating headache is a common feature of subarachnoid haemonhage (SAH).

Diagnosis of Subarachnoid hemorrhage

- The hallmark of aneurysmal rupture is blood in the cerebrospinalfluid.
- More than 95% cases have enough blood to be visualized on a high quality non contract CT scan obtained within 72h.
- MRI can also be used to diagnose subarachnoid hemorrhage but CT is more sensitive than MRI for acute blood

225. A young male patient has history of diarrhea 3-4 weeks back, now complaining of right knee pain, swelling in other joints with signs of inflammation and dactylitis. The most probable causative organism is

a) Shigella

b) Campylobacter

c) E coli

d) Yersinia

Correct Answer - A

Answer- a. Shigella

This is a case of reactive arthritis.

- Most common cause of reacticve arthrttis is chlamydia trachomatis.
- Reiter's syndrome is causedly preceding infection of genital tract by chlamydia trachomatis (M.C.) or GI tract by Shigella
- Salmonella, Ureoplasma ureolyticum, Yersinia, Campylobacter

226. Sinus arrhythmia is due to-

a) Sinus node disease

b) Exaggerated response to sympathetic system

c) Fluctuating parasympathetic response during respiration

d) Decreased heart rate in inspiration

Correct Answer - C

Answer-C. Fluctuating parasympathetic response during respiration

Sinus rhythm with a beat-to-beat variation in the P-P interval (the time between successive P waves), producing an irregular ventricular rate.

Sinus arrhythmia is a normal physiological phenomenon, most commnonly seen in young, healthy people.

- The heart rate varies due to reflex changes in vagal (parasyntpathetic) tone during the different stages of the respiratory cycle,
- Inspiration increases the heart rate by decreasing vagal tone.
- With the onset of expiration, vagal tone is restored, leading to a subsequent decrease in heart rate.

227. Changes seen in early stage of type-2 diabetes mellitus

a) Decreased output of glucose from liver

b) Increase in C-peptide

c) Increase in GIP

d) All of the above

Correct Answer - C

Answer- C. Increase in GIP

During the induction of insulin resistance,increased glucagon levels and increased glucose-dependent insulinotropic polypeptide (GIP) level accompany glucose intolerance. In the progression from normal to abnormal glucose tolerance, pospranadial blood glucose levels increase first. Eventually, fasting hyperglycemia develops as suppression of hepatic glconeogenesis fails.

228. True about joint involvement in hemochromatosis are all except

a) Progressive after phlebotomy

b) Involvement 2nd & 3rd MCP joints on X-ray

c) Chondrocalcinosis is not a feature

d) Non-inflammatory changes

Correct Answer - C

Answer- C. Chondrocalcinosis is not a feature

- The arthropathy of hemochromatosis is a chronic progressive noninflammatory arthropathy.
- A Predilection for disease in the second and third MCP joints is notable, and enlargement of these joints is readily seen in the fingers when they are extended to form a V, as in the victory sign.
- Arthropathy often does not improve after iron depletion therapy (phlebotomy), and persistence of joint symptoms is often detrimental to patients quality of life.

229. Marker for biliary tract obstruction [cholestasis]-

a) Alkaline phosphatase

b) Aspartate transaminase

c) Alanine transaminase

d) Creatinine kinase

Correct Answer - A
Answer-A. Alkaline phosphatase
Enzymes that reflect cholestasis

- Alkaline phosphatase
- 5'- nucleotidase
- Gamma-glutamyl transpeptidase (GGT)
- Lipoprotein-X is an abnormal lipoprotein that appears in the sera of patients with obstructive jaundice and thus is a sensitive indicator of cholestasis.

230. Mytonic dystrophy is due to-

a) Expansion in coding region

b) CAG triple nucleotide repeat mutation

c) CTG triple nucleotide repeat mutation

d) Involves chromosome 15

Correct Answer - C

Answer-C. CTG triple nucleotide repeat mutation

- Myotonic dystrophy is associated with a trinucleotide CTG repeat expansion on chromosome 19.
- This expansion affects the mRNA for the dystrophila myotonia protein kinase (DMPK).

Triple nucleotide repeat mutations

- Normally, a codon is triplet (trinucleotide) (e.g. for CGG it is 5-50 and CGG triplet codon can be repeated, at a stretch, 5-50 times)
- Non-coding region

231. Intravenous fluid of choice in management of diabetic ketoacidosis

a) Normal saline

b) Colloids

c) 5% dextrose

d) Dextran - 70

Correct Answer - A
Answer-A. Normal saline
Treatment of DKA
1. Insulin

- A bolus of IV IM short acting insulin (regular insulin) should be given immediately to reduce blood glucose level'
- Subsequent treatment should piovide continuous and adequate level ofcirculating insulin'

2. IV fluid

- Due to vomiting, osmotic diuresis and hyperventilation, there is dehydration and Na. deficit in DKA which should be treated by iv saline infusion.
- Normal saline (0.9% saline) k the fluid of choice

3. KCl
4. Sodium bicarbonate
5. Magnesium and phosphate

232. If urine dipstick shows +3, what is the protein level in mg/dl in urine

a) 30 mg/dl

b) 50 mg/dl

c) 100 mg/dl

d) 300 mg/dl

Correct Answer - D
Answer-D. 300 mg/dl
1+ = 30mg/dl
2+ = 100mg/dl
3+ = 300mg/dl
4+ = 1000mg/dl

233.

A surgeon is exploring the mediastinum found a thymic mass invading the neighboring pericardium and phrenic nerves. Frozen section is showing benign thymoma. The next intraoperative plan should be

a) Abandon the surgery & start chemotherapy

b) Abandon the surgery & start radiotherapy

c) Complete resection of tumor

d) Close the mediastinum and wait for final report

Correct Answer - C

Answer- C. Complete resection of tumor

- The treatment of choice for the patient presented in the question is as complete a resection as possible while at least one phrenic nerve is preserved.
- Postoperatively, the patient should receive x-ray therapy, and the combination of surgery plus irradiation offers a good chance of satisfactorily controlling the neoplasm.

234. After a transient ischemic attack, chances of stroke are maximum in

a) First 48 hours

b) First 10 days

c) First 1 month

d) First 5 months

Correct Answer - A

Answer-A. First 48 hours

- The largest study of risk of recurrent stroke after TIA showed that 50% of all ischemic strokes after TIA occur within 48 hours of the TIA.
- TIAs are episodes of stroke symptoms that last only briefly < 24h, but most TIAs last < 1 h.
- The risk of stroke after a TlA is- 1O - 15% in the first 3 months,with most events occurring in the first 2days.

235. APGAR score-6 means-

a) Normal

b) Mild depression

c) Severe depression

d) Needs immediate resuscitation

Correct Answer - B

Answer-B. Mild depression

APGAR Score is a quantitative method for assessing infants respiratory circulatory and neurological status

The test is generally done at one and five minutes afier birth, and may be repeated later if the score is and remains low. Scores 3 and below are generally regarded as critically low, 4 to 6 fairly low, and 7 to l0 generally normal.

	0	1	2
HR	Absent	<100	>100
Respiration	Absent	Irregular/weakcry	Strong cry
Reflex irritability	No response	Grimace	Couh/sneeze
Muscle tone	None	Some flexion	Well flexed
Color	Central cyanosis	Peripheral cyanosis	Pink

236. Carpopedal spasm in hyperventilation occurs because

a) Increased calcium uptake by sarcoplasmic reticulum of muscles

b) Increased calcium uptake by bones

c) Increased calcium binding to plasma protein

d) Increased urinary excretion of calcium

Correct Answer - C
Answer- C. Increased calcium binding to plasma protein
Carpopedal spasm and tetany is due to hypocalcemia.
"The alkalosis that result from hyperventilation may worsen the hypocalcemia by increasing the fraction ionized calcium bound to plasma protein.

237. An 18 years female complaining of breathlessness fainting and tingling sensation over lips. She has history of similar episodes in past. What is the diagnosis

a) Myocardial infarction

b) ARDS

c) Upper respiratory tract infection

d) Hyperventilation

Correct Answer - D

Answer- D. Hyperventilation

Tingling around mouth (over lips) is seen in hyperventilation due to hypocalcemia.

Symptoms of hyperventilation include-

1. Abdominal symptoms (due to swallowing of excess air): bloating, burping, excessive flatus
2. CNS symptoms (due to dcrease PCO2): weakness,fainting confusion, dizziness, restlessness, anxiety, panic attack.
3. Due to hypocalcemia: numbness & tingling around mouth & in limbs, corpopedal spasm, muscle twiching, tetany
4. Chest symptoms : chest pains, shortness of breath & breathlessness, wheezing, tachypnea.

238. Which of the following rhythm associated with cardiac arrest is shockable

a) Asystole

b) Pulseless activity

c) Ventricular fibrillation

d) All of the above

Correct Answer - C

Answer-C. Ventricular fibrillation

1. Ventricular fibrillation (VF)→most common
2. Pulseless ventricular tachycardia (VT)
3. Asystole
4. Pulseless electrical activify (PEA)

Shockable Rhythms

- Ventricular fibrillation:disorganised electric activity of the ventricular myocardium which fails to generate significant forward blood flow.
- Pulseless ventricluar tachycardia: organised electric activity of the ventricular myocardium which fails to generate significant forward blood flow.

239. Infective organism causing AV block

a) Treponema pallidum

b) Borrelia burgdorferi

c) Cryptococcus

d) Listeria monocytogenes

Correct Answer - B

Answer- B. Borrelia burgdorferi

- Complete AV block may occur with infections that cause myocarditis.
- ' Myocarditis affects conduction system and can cause arrhythmias, typical causing complete AV block.

Infections causing bacteria AV block

1. Diphtheria
2. Lyme disease (Borrelia burdorferi)
3. Rocky mountain spotted fever
4. Rheumatic fever

Causes of Mobitz II second degree AV block include following

- Degenerativc disease of the His-Purkinje system
- Damage of the conduction system from coronary artery disease, valve surgery, myocardial infarction. myocarditis, infiltrative cardiomyopathies (sarcoidosis, hemochromatosis),, myxedema, Lyme disease, neuromuscular disease, and AV junction ablation
- Systemic diseases (eg, ankylosing spondylitis, Reiter syndrome)

240. According to American Psychiatric Association, criteria for prolonged seizure after ECT, if the seizure lasts more than

a) 140 sec

b) 150 sec

c) 160 sec

d) 180 sec

Correct Answer - D
Answer- D. 180 sec
Prolonged seizure is defined as one that lasts for more than 3 minutes"
"Duration of more than 3 minutes is the criterion for prolonged seizures according to the American psychiatric association (1990)"

241. pANCA positive vasculitis is

a) Wegener's granulomatosis

b) Churg - Strauss syndrome

c) Polyarteritis nodosa

d) All of the above

Correct Answer - B
Answer- b. Churg - Strauss syndrome
PANCA
Typically found in:

- Microscopicpolyangiitis
- Churg-Strausssyndrome
- Idiopathiccrescenticglomerulonephritis
- Goodpasteur'ssyndrome.
- pANCA's are also associated with certain non-vasculitic entities such as certain rheumatic and nonrheumatic autoimmune diseases, Inflammatory bowel diseases, certain drugs. Infections such as endocarditis and bacterial airway infection in patients with cystic fibrosis

242. A patient has been diagnosed clinically as a case of meningitis. MRI of brain is showing soap - bubble lesion, and organism can be identified by India - Ink prepration. The cause is

a) Tuberculosis

b) Cryptococcus

c) Listeria

d) Naegleria fowleri

Correct Answer - B

Answer- B. Cryptococcus

- The diagnosis is cryptococcal meningitis.
- When the ryst lesion are found in virchow - robin spaces (V.R. spaces), the V-R. spaees would present a soap - bubble appearance, which contain a multitide of cryptococcus, accompanied with or without inflammatory reactions.

Following tests are used:-

A) Serology

- The most useful serological test is LPA test (Latex aggJutination test for the detection of cryptococcal polysaccharide capsular antigen).
- This is highly specific and sensitive; and gives better results thafi direct microscopy and cultures,

B) Direct microscopy

- Unstained wet preperations of CSF mixed with drop of India ink or nigrosine demonstrate the capsule as a clear halo .
- Methenamine silver or periodic aciD-Schif are used for staining a

tissue sample.

243. Silicosis is seen due to exposure in which industry

a) Mica

b) Coal

c) Paint

d) Refinery

Correct Answer - A:C
Answer- A & B
Silicosis is a fibrotic lung disorder caused by inhalation, retention and pulmonary reaction to crystalline silica, as a result of exposure during mining, stone crushing and quarrying activities.
The most common form of silica is quartz.

244. What will the estimated Pa02 after giving Fi02 at 0.5 in a normal person?

a) > 50 mmHg

b) > 100 mmHg

c) > 150 mmHg

d) > 200 mmHg

Correct Answer - D

Answer- D. > 200 mmHg

In normal person, the measured $P_A O_2$ should equal to 5 x FiO_2 . For example, a patient breathing 40% O (FiO_2 of 0.4) should have a PaO_2 5 x 40 = 200 mmHg. A $P_A O_2$ less than 4 to 5 times the FiO_2 suggest poor lung function or hypoventilation.

245. In Asthma patient positive bronchodilator reversibility test is indicated by

a) Increase in FEV1 > 5% after SABA inhalation

b) Increase in FEV1 > 12% after SABA inhalation

c) Increase in FEV1 > 25% after SABA inhalation

d) Increase in FEV1 > 50% after SABA inhalation

Correct Answer - B

Answer- B. Increase in FEV1 > 12% after SABA inhalation

Bronchial reversibility is defined as SABA induced increase in FEVI > 12% and > 0.20 litres (200 ml)

246. ADAM TSB.13 deficiency is seen in

a) TTP

b) HUS

c) Wegner's granulomatosis

d) Membranous nephropathy

Correct Answer - A

Answer- A. TTP

- TTP is included among group of diseases called thrombotic microangiopathic which are characterised by widespread thrombosis in microcirculation. The other disorder which is included in this group include hemolytic uremic syndrome (HUS)
- Small vessels like terminal arterioles and capillaries are involved.

Pathogenesis of TTP

- Patients with TTP are deficient in an enzyme called ADAMTSB.T3 also known as vWF metalloprotease that degrades very high molecular weight multitimers of vWF.

247. Sternal puncture is done at which site

a) Junction of upper and lower half of body

b) Upper part of manubrium

c) Lower part of manubrium

d) Just above xiphisternum

Correct Answer - B

Answer-B. Upper part of manubrium

Sternal puncture

- Manubrium sterni is the preferred site for bone marrow aspiration because it is subcutaneous and readily accessible.
- The bone marrow sample is required for haematological examination. A thick needle is inserted into the upper part of the manibrium to avoid injury to arch of aorta, which lies behind the lower part.

248. Complications of massive blood transfusion are all except

a) Hypercalcemia

b) Hyperkalemia

c) Hypokalemia

d) Hypothermia

Correct Answer - B:D

Answer- A. Hypercalcemia

- Hypothermia- Due to cold blood transfusion
- Hyperkalemia- K+ moves out of RBC during storage
- Hypokalemia- K+ taken back by depleted RBC

Important complications of massive blood transfusion

. Fluid overload
. Hypothermia
. Hyperkalemia
. Hypocalcemia
. Hypomagnesemia
. Acidosis / Alkalosis

249. Dysgeusia/hypogeusia is seen in deficiency of which mineral

a) Zinc

b) Selenium

c) Iron

d) Copper

Correct Answer - A

Answer- A. Zinc

Dysgeusia is altered (distorted) sensation of taste or simply bad taste in mouth. It may be metallic taste, rancid taste, salty taste, sour of foul taste.

Important causes of dysgeusia are-

- Nutritional deficiency- Zinc deficiency, Vitamin B-12 deficiency

250. Ocular hallmark of giant cell arteritis is

a) Papilloedema

b) CRAO

c) AION

d) CRVO

Correct Answer - C

Answer- C. AION

- The most common ocular manifestation of giant cell arteritis is visual loss, most commonly secondary to anterior ischemic
- optic neuropathy (AION) due to occlusion of short posterior ciliary arterities.
- Ophthalmic artery involvement can lead to sudden blindness which is the most feared complication of temporal arteritis.

251. True about klinefelter syndrome is

a) Height > arm span

b) Karyotype 45 x 0

c) Testis and sperm count are normal

d) Puberty is attained at normal age

Correct Answer - D

Answer- D. Puberty is attained at normal age

KLINEFELTER SYNDROME

- Klinefelter syndrome is the most common chromosomal disorder associated with male hypogonadkm anit infertitity.
- It is defined classically by a 47, XXY karyotype with variants demonstrating additional X and Y chromosomes.

Pathophysiology:

- The addition of more than 1 extra X or Y chromosome to a male karyotype

Sexual characteristics-

- Patients may lack secondary sexual characterstics because of a decrease in androgen production. This results in sparse facial/ body/sexual hair, a high-pitched voice. They have eunuchoid body habitus.
- Testicular dysgenesis (small firm testis, testis size <10 mL) may be present in postpubertal patients. Infertility/azoospermia may result from atrophy of the seminifercous tubules. Infertility is seen in practically all individuals with a 47 XXY karyotype. Patients with Klinefelter syndrome mosaicism (46,XY/ 47,XXY) can be fertile.

252. A 45 years male patient is presenting with lower abdominal pain, intermittent diarrhea and some weight loss. The endoscopic finding is showing following figure. The diagnosis is-

a) Tropical sprue

b) Coeliac sprue

c) Ulcerative colitis

d) Crohn's disease

Correct Answer - D

Answer- D. Crohn's disease

Clinical features of crohn's disease-

- MC symptom is intermittent and colicky abdominal pain, most commonly noted in the lower abdomen.
- Other syrnptoms are intermittent diarrhea and weight loss.
- The onset of symptoms is insidious, and once present, their severity follows a waxing and waning course.
- This is cobblestone appearance'→ characteristic of Crohn's disease.

253. Which of the following is not true about the risk factors of systemic sclerosis?

a) Human CMV infection

b) Human parvovirus B 19 infection

c) Miners exposed to lead

d) Drugs like bleomycin

Correct Answer - C

Answer- C. Miners exposed to lead

- Patients with Systemic sclerosis (SSc) have increased serum antibodies to human cytomegalovirus (hCMV), and antitopoisomerase-I (Scl-70) autoantibodies recognize antigenic epitopes present on the hCMV-derived proteins.
- Drugs implicated in SSc-like illnesses include bleomycin, pentazocine and cocaine, and appetite suppressants linked with pulmonary hypertension.

254. Which of the following is the most serious late side effect of treatment of Hodgkins disease?

a) Cardiac injury

b) Infertility

c) Hair loss

d) Osteoporosis

Correct Answer - A

Answer- A. Cardiac injury

- The most serious late side effects include second malignancies and cardiac injury. Patients are at risk for the development of acute leukemia in the first 10 years after treatment with combination chemotherapy regimens that contain alkylating agents plus radiation therapy.

255. A 34 years old male patient presents with symptoms of headache nausea and vomiting and intermittent focal seizures. On investigation patient is diagnosed to be suffering from neurocysticercosis. Antiparasitic drug used in the management of these patients are given for a duration of

a) 15 - 30 days

b) 60 - 90 days

c) 3 - 4 months

d) 6 months

Correct Answer - A

Answer- A. 15 - 30 days

- For the treatment of patients with brain parenchl.mal cysticerci. most authorities favor antiparasitic drugs, including albendazole (15 mdkgper dayforS-28 days) orpraziquantel (50-100 mdkgdailyinthree divideddoses for 15-30 days).

256. Incidence of Pneumocystis jiroveci pneumonia has declined in recent times due to which of the following?

a) Better living conditions

b) Decrease in the incidence of HIV infection

c) Use of combination ART

d) Stronger immunity of the cohort

Correct Answer - C

Answer- C. Use of combination ART

- Pneumocystis pneumonia (PCP), once the hallmark of AIDS, has dramatically declined in incidence following the development of effective prophylactic regimens and the widespread use of cART.

257. Most common cause of death in Rheumatoid Arthritis?

a) Ischemic heart disease

b) ARDS

c) Pulmonary fibrosis

d) Hepatic failure

Correct Answer - A

Answer- A. Ischemic heart disease

- The overall mortality rate in RA is two times greater than the general population, with ischemic heart disease being the most common cause of death followed by infection.

258. Gorlins formula is used to calculate

a) Area of stenotic aortic valve

b) Amount of daily calorie intake

c) Body mass index

d) Basal metabolic rate

Correct Answer - A

Answer-A. Area of stenotic aortic valve

- The stenotic valve orifice are is derived fromthe pressure gradient and cardiac output with the formula developed by Gorlin and Gorlin, which involves the fundamental hydraulic relationships, linking the a.ea of an orifice to the flow and pressure drop across the orifice.

259. Which of the following is/ are the cause/s of unilateral elevation of hemidiaphragm?

a) Pulmonary hypoplasia

b) Subphrenic infection

c) Phrenic nerve palsy

d) All the above

Correct Answer - D

Answer- D. All the above

Posture - Lateral decubitus position (dependent side)

- Gaseous distension of stomach or colon
- Dorsal scoliosis
- Pulmonary hypoplasia
- Pulmonary collapse
- Phrenic nerve palsy
- Eventration
- Pneumonia or pleurisy
- Pulmonary thromboembolism
- Rib fracture and other painful conditions
- Subphrenic infection
- Subphrenic mass

260. Which of the following is a feature of first degree AV block?

a) PR interval > 200 ms

b) Inversion of T wave

c) Progressive shortenting of PR interval

d) Presence of U wave

Correct Answer - A

Answer- A. PR interval > 200 ms

- First-degree AV block (PR interval >200 ms) is a slowing of conduction through the AV junction.
- The site of delay is typically in the AV node but maybe in the atria, bundle of His, or His-Purkinje system.
- In second degree AV block there is an intermittent failure of electrical impulse conduction from atrium to ventricle.
- Second-degree AV block is subclassified as Mobitz type I (Wenckebach) or Mobitz type II.

261. Recommended drug for patients with intrahepatic Wilson's disease i.e. patients with hepatitis, is

a) Zinc

b) Triamterene

c) Trientine

d) Penicillamine

Correct Answer - A

Answer- A. Zinc

- Hepatitis or cirrhosis without decompensation Zinc (first choice) & Trientine (2nd choice).

262. Which of the following is an electrocardiographic feature of pulmonary hypertention?

a) T wave inversion

b) Presence of U wave

c) SI, Q3, T3 pattern

d) PR prolongation

Correct Answer - A
Answer- A. T wave inversion
The electrocardiogram (ECG) of a patient with PH may demonstrate.

- Signs of right ventricular hypertrophy or strain including : -
- Right axis deviation,an R wave/S wave ratio greater than one in lead Vl (dominant R wave)

263. Drug of choice for intractable hiccups -

a) Promethazine

b) Chlorpromazine

c) Scopolamine

d) Clozapine

Correct Answer - B

Answer- B. Chlorpromazine

- Hiccups are repeated spasmodic involuntary contractions ofthe diaphragm that occur when you inhale.

Persistent or Intractable Hiccups:-

i) Chlorpromazine → Drug of choice ii) Baclofen iii) Diphenylhydantoin

iv) Valproic acid v) Amitriptyline vi) Metoclopromide

264. Which of the following is true about rheumatic fever

a) Characteristic manifestation of carditis in previously unaffected individuals is mitral stenosis

b) Chorea occurs in the absence of other manifestations after prolonged latent period

c) Isolated aortic valve involvement is most common

d) 90% of the patients with acute rheumatic fever proceed to rheumatic eart disease

Correct Answer - B

Answer- B. Chorea occurs in the absence of other manifestations after prolonged latent period

- Acute rheumatic fever (ARF) is a multisystem disease resulting from an autoimmune reaction to infection with group A streptococcus.
- The endocardium, pericardium, or myocardium may be affected. Valvular damage is the hallmark of rheumatic carditis
- The mitral valve is almost always affected, sometimes together with the aortic valve; isolated aortic valve involvement is rare.
- Early valvular damage leads to regurgitation.
- usually as a result of recurrent episodes, leaflet thickening, scarring, calcification, and valvular stenosis may develop.
- Therefore the characteristic manifestation of carditis in previously unaffected individuals is mitral regurgitation, sometimes accompanied by aortic regurgitation.

265. Lassa fever virus belongs to family

a) Arenaviridae

b) Bunyaviridae

c) Flaviviridae

d) Reoviridae

Correct Answer - A

Answer- A. Arenaviridae

- There are two main phylogenetic branches of Arenaviridae: the Old World viruses, such as lassa fever and lymphocytic choriomeningitis (LCM) viruses.

266. Orthodeoxia is a feature of

a) Hepatorenal syndrome

b) Hepatopulmonary syndrome

c) Hepatic encephalopathy

d) Hepatic failure

Correct Answer - B
Answer- B. Hepatopulmonary syndrome
Orthodeoxia refeis to arterial desaturation noted when sitting uP as opposed to lying down.
Conditions associated:
A) Cardiac (intracardiac shunt)

- Atrial septal defect (ASD)
- Patent foramen ovale (PFO)
- Pneumonectomy
- Usually associated with pulmonary hypertension or raised right atrial (RA) pressure (e.g. constrictive pericarditis, cardiac tamponade).

B) Pulmonary (intrapulmonary right-to-left shunts)

- Hepatopulmonarysyndrome
- Pulmonary disease
- COPD
- Pulmonary embolism

C) Upper airway tumour

- Acute respiratory distress syndrome

D) Miscellaneouscauses

- Autonomic neuropathy
- Acute respiratory distress syndrome (ARDS)

267. Increased urinary excretion of calcium is seen in which of the following condition/s?

a) Sarcoidosis

b) Glucocorticoid excess

c) Wilsons disease

d) All the above

Correct Answer - D
Answer- D. All the above
Parathyroid hyperfunction

- Sarcoidosis
- Primary cancers ofthe breast and bladder
- Metastatic malignancies
- Wilson's disease
- Renal tubular acidosis
- Glucocorticoid excess
- Respiratory disease

268. Which of the following toxin is responsible for manifestations of puffer fish poisoning?

a) BOAA

b) Tetrodotoxin

c) Strychnine

d) Ciguatoxin

Correct Answer - B

Answer- B. Tetrodotoxin

- The toxin involved is tetrodotorin.
- Syrnptoms of pufferfish poisoning include initial tingling, numbness of lips, tongue and fingers. trading to the paralysis of the extremities, ataxia, difficulty in speaking, and finally death by asphpiation sue to respiratory paralysis.

269. Levine sign is seen in

a) Stable angina pectoris

b) Acute bronchial asthma

c) Hemolytic anemia

d) Gastroesophageal reflux disease

Correct Answer - A
Answer- A. Stable angina pectoris
Stable Angina Pectoris:

- This episodic clinical syndrome is due to transient myocardial ischemia
- When the patient is asked to localize the sensation, he or she typically places a hand over the sternum, sometimes with a clenched fist, to indicate a squeezing, central, substernal discomfort (Levine's sign).

270. Hormonal abnormalities in men and post menopausal women suffering from rheumatoid arthritis include the following except

a) Decreased testosterone

b) Decreased luteinizing hormone

c) Decreased dehydroepiandrosterone

d) Decreased thyroid autoantibodies

Correct Answer - D

Answer- D. Decreased thyroid autoantibodies

- Men and postmenopausal women with RA have lower mean serum testosterone, luteinizing hormone (LH) and dehydroepiandrosterone (DHEA) levels than control populations.

271. Which of the following is not an absolute contraindication for thrombolytic therapy in acute ST segment elevation myocardial infarction?

a) Significant closed head injury

b) Symptoms suggestive of aortic dissection

c) Presence of metastatic intracranial malignancy

d) Pregnancy

Correct Answer - D
Answer- D. Pregnancy
Pregnancy is a relative contraindication for thrombolytic therapy in acute ST segment elevation myocardial infarction and not an absolute contraindication.
Historv of any intracranial hemorrhagic

- History of ischemicl stroke within the preceriing thrse months, with the important exception of acute ischemic storke seen within three hours, which may be treated with thrombolytic therapy.
- Presence of a cerebral vascular malformation or a primary or metastatic intracranial malignancy.

Symptoms or signs suggestive of an aortic dessection-

- A bleeding diathesis or active bleeding, with the exception of menses. thrombolytic therapy may increase the risk of moderate bleeding, which is offset by the benefits of thrombolysis.

272. Bannwarth's syndrome develops secondary to infection with

a) B. burgdorferi

b) T. pallidum

c) B.cereus

d) afragilis

Correct Answer - B

Answer- B. T. pallidum

- It is also called neuroborrelisosis.
- It is secondary to infection with B. burgdorferi.
- Meningeal irritation may develop early in Lyme disease when erphema migrans is present.
- untreated patients develop frank neurologic abnormalities, including meningitis,
- subtle encephalitic signs, cranial neuritis (including bilateral facial palsy), motor or sensory radiculoneuropathy, peripheral neuropathy, mononeuritis multiplex, cerebellar ataxia, or myelitis.
- In Europe and Asia, the first neurologic sign is characteristically radicular pain, which is followed by the development of CSF pleocytosis (called meningopolyneuritis, or Bannwarth's syndrome); meningeal or encephalitic signs are frequently absent.

273. Which of the following complications is not seen in mitral valve prolapse?

a) Stroke

b) Infective endocarditis

c) Mitral stenosis

d) Ventricular arrhythmia

Correct Answer - C
Answer- C. Mitral stenosis
Infective endocarditis

- Mitral insuficiency (mitral regurgitation)
- Stroke or other systemic infarct resulting from embolism of leaflet thrombi
- Arrhythmias

274. Which immunoglobulin combination is predominantly in pathogenesis of cryglobulinemic vasculitis

a) IgA + IgG

b) IgM + IgG

c) IgA + IgE

d) IgE + IgM

Correct Answer - B

Answer- B. IgM + IgG

- cryoglobulinemic vasculitis occurs when an aberrant immune response to hepatitis C infection leads to the formation of immune complexes consisting of hepatitis C antigens,polyclonal hepatitis C-specific IgG, and monoclonal IgM rheumatoid factor.

275. A patient presents with symptoms of chronic diarrhea and cough and sputum production. On investigations he is diagnosed to be suffering from both HIV infection and pulmonary tuberculosis. What medical management is to be started first in this patient?

a) Antitubercular therapy

b) Antiretroviral therapy

c) Antitubercular therapy or antiretroviral therapy

d) Sequence of beginning treatment is not important

Correct Answer - A

Answer- A. Antitubercular therapy

- In the question give, it is essential to begin antituberculous therapy before beginning antiretroviral therapy
- Infections most commonly associated with IRIS include Mycobacterium tuberculosis and cryptococcal meningitis.
- Immune reconstitution inflammatory syndrome (IRIS) (also known as immune recovery syndrome) can develop if antiretroviral therapy is begun before treating the opportunistic infection.

276. Intra arterial thrombolysis is indicated in

a) Suspected occlusion of larger artery

b) History of subarachnoid hemorrhage

c) History of dementia

d) Stroke of > 6 hours duration

Correct Answer - A

Answer- A. Suspected occlusion of larger artery

- Acute ischemic stroke < 6 hours in duration
- Stroke is significant, (i.e., disabling or life threatening)
- Suspected occlusion of a large artery (i.e., non-lacunar stroke syndrome)
- No hemorrhage on screening computed tomography scan

277. Category of patients with juvenile idiopathic arthritis, with HLA B27 positive in most of the cases, who present with entheisits, lower limb arthritis involving knees and ankle and presence of inflammatory low back pain, is most likely to be

a) Enthesitis related arthritis

b) Rheumatoid arthritis

c) Reactive arthritis

d) Cryoglobulinemia

Correct Answer - A

Answer- A. Enthesitis related arthritis

- Arthritis most commonly affects the lower extremities, knees and ankles, but the hip can also be affected.
- Enthesitis occurs frequently and is commonly seen as plantar fasciitis, achiles tendinitis and patellar tendon enthesitis.
- Inflammatory back pain is often seen, defined as lumbosacral spinal pain at rest, with morning stiftress that improves on movement.
- There is a strong association with HLA B27,with most of the patients of enthesitis associated arthritis positive for HLA B27.
- Iritis, usually acute, severe hip disease.

278. Features of superior vena cava syndrome are all except which of the following?

a) Facial swelling

b) Hoarseness

c) Aggravation of symptoms in sitting position

d) Syncope

Correct Answer - C

Answer- C. Aggravation of symptoms in sitting position

Superior vena cava syndrome (SVCS) is the clinical manifestation of superior vena cava (SVC) obstruction, with severe reduction in venous return from the head, neck and upper extremities.

Aggravating factors:

- Bending forward or lying down may aggravate the symptoms.

279. Cigarette smoking increases the risk of all the following diseases except

a) Pancreatic carcinoma

b) Cerebrovascular accident

c) Sudden infant death syndrome

d) Primary pulmonary hypertention

Correct Answer - D
Answer- D. Primary pulmonary hypertention
Coronayheart disease

- Cerbrovascularlesions
- Aortic aneurysm
- Chronic airway obstruction
- Sudden infant death syndrome
- Infant respiratory distress syndrome
- Cancer of Pancreas, Lung, Kidney.

280. Which of the following is a characteristic feature of Moyamoya disease?

a) Involvement of proximal internal carotid artery

b) Absence of vascular inflammation

c) Patients can be given anticoagulants without any additional risk

d) Surgical bypass from internal carotid artery to middle meningeal artery can be a treatment.

Correct Answer - B

Answer- B. Absence of vascular inflammation

- Occlusive disease involving large intracranial arteries, especially the distal internal carotid artery and the stem of the middle cerebral and anterior cerebral artery.
- The lenticulostriate arteries develop a rich collateral circulation around the occlusive lesion, which gives the impression of a 'puff of smoke" (moyamoya in]apanese) on conventional x-ray angiography
- Occurs mainly in Asian children or young adults.
- Surgical bypass of extracranial carotid arteries to the dura or MCAs may prevent stroke and hemorrhage.

281. Which of the following inherited neutropenias show a self limited course?

a) Shwachman-Diamond syndrome

b) Dyskeratosis congenita

c) Chiediak higashi syndrome

d) Autoimmune neutropenia of infancy

Correct Answer - D

Answer- D. Autoimmune neutropenia of infancy

- It is recognized as a fairly specific syndrome of early childhood.
- Low neutrophil numbers are often discovered during the course ofroutine investigation for benign febrile illness.
- The illness abates but the neutropenia persists, sometimes for months and occasionally for years.
- The prognosis is good and neutropenia is self-limited albeit protracted, and patients seldom develop serious bacterial infections.

282. Modified wells criteria is used for initial assessment of patients with suspected

a) Pulmonary embolism

b) Pleural Effusion

c) Cardiac tamponade

d) Myocardial infarction

Correct Answer - A
Answer- A. Pulmonary embolism

283. Neoplastic cells in Franklin disease express

a) CD5

b) CD10

c) CD55

d) CD79a

Correct Answer - D

Answer- D. CD79a

- In classic Franklin disease, neoplastic lymphocytes, plasmacytoid lymphocytes and plasma cells can be found in lymph nodes, Waldeyer ring, gastrointestinal tract and other extranodal sites, spleen, liver, bone marrow.
- Systemic symptoms- fever, weight loss, weakness, anorexia, recurrent bacterial infections.
- Neoplastic cells in Franklin disease, are believed to represent post germinal center B cells. The neoplastic cells contain gamma heavy chains in the cytoplasm ofcells (without light chains) and express CD 79a.
- Neoplastic lpnphocytes in this disorder express CD20, neoplastic plasma cells in this disorder express CD 138.

284. Value of Pa02/ Fi02 chracteristic of ARDS is

a) < 200 mmHg

b) 200 - 400 mmHg

c) 400 - 600 mmHg

d) 600 - 800 mmHg

Correct Answer - A

Answer- A. < 200 mmHg

- Acute respiratory distress syndrome (ARDS) is a clinical symdrome of severe dyspnea of rapid onset, hypoxemia, and diffirse pulmonary infiltrates leading to respiratory failure.
- The arterial PaO, (in mmHg)/FiO, (inspiratory O, fraction) <200 mmHg is characteristic of ARDS, while a PaO, /FiO, between 200 and 300 identifies patients with ALI who are likely to benefit from aggressive therapy.

285. Which of the following is not an evidenced based recommended therapy for the management of acute respiratory distress syndrome

a) Low tidal volume mechanical ventilation

b) Inhaled nitric oxide

c) Minimize left atrial filling pressures

d) Prone positioning

Correct Answer - B
Answer- B. Inhaled nitric oxide

- Mechanical ventilation
- Lorv tidal volumc
- Mininrize left atrial filling pressures
- High-PEEP or "open lung"
- Prone position
- Glucocorticoids
- High frequency ventilation

286. Anemia seen in patients with orotic aciduria is corrected with

a) Folic acid supplementation

b) Vitamin B12 supplementation

c) Replacement of uridine

d) Iron supplementation

Correct Answer - C

Answer- C. Replacement of uridine

- Hereditary orotic aciduria is caused by mutations in a bifunctional enzyme, uridine-5 -monophosphate (UMP) synthase, which converts orotic acid to UMP in the de novo synthesis pathway.
- Replacement of uridine (100-200 mg/kg per day) corrects the anemia, reduces orotic acid excretion, and improves the other sequelae of the disorder.

287. Massive hemoptysis seen in

a) Mitral stenosis

b) Aortic stenosis

c) Pulmonary stenosis

d) Aortic regurgitation

Correct Answer - A

Answer- A. Mitral stenosis

- Large volume hemoprysis, referred to as massive hemoptysis , is variably defined as hemoptysis of greater than 200-600 cc in 24 h. Massive hemoptysis should be considered a medicai emersency.
- Hemoptysis does not occur from heart failure itself. Most commonly it is due to mitral valve diseases like or mitral mitral stenosis regurgitation.

288. Investigation of choice to establish the diagnosis in case of nephrotic syndrome in adult is

a) Renal biopsy

b) DMSA

c) CT Scan

d) MRI

Correct Answer - A

Answer- A. Renal biopsy

- In adults since steroid responsive disease is less likely (<30%), and a wide differential diagnosis ofnephrotic syndrome exists, renal biopsy is recommended to establish the diagnosis.

289. Venous thrombosis In patients with paroxysmal nocturnal hemoglobinuria is observed in

a) Cerebral veins

b) Leg veins

c) Intrabdominal veins

d) Axillary vein

Correct Answer - C

Answer- C. Intrabdominal veins

- Venous thrombosis is an inconstant but severe clinical manifestation of P.N.H.
- Thrombosis occcurs due to absence of CD59 which k a membrane attached protein
- Thrombosis usually occurs in abdominal veins. Intra-abdominal yeins are the most common site of thromosis in P.N.H.

290. What is the cause of hyperkalemia in chronic kidney failure

a) Release from cells

b) Hyperinsulinemia

c) Decreased excretion

d) Hyperaldosteronism

Correct Answer - C
Answer- C. Decreased excretion

291. 24 years old female patient presents with acute blood loss secondary to bilateral fracture femur. Reticulocytosis is evident on peripheral smear examination. Patient's anemia can be categorized into which of the following types?

a) Normocytic normochromic

b) Normocytic Hypochromic

c) Microcytic hypochromic

d) Microcytic normochromic

Correct Answer - A

Answer- A. Normocytic normochromic

- Anemia Due to Acute Blood loss (Acute posthemorrhagic anemia):
- It is a variety of normocytic normochromic anemia.
- Posthemorrhagic anemia can be external (as after trauma, or obstetric hemorrhage) or internal (e.g., from bleeding in the gastrointestinal tract, rupture of the spleen, rupture of an ectopic pregnancy, subarachnoid hemorrhage).
- Such type of anemia is accompanied by reticulocytosis.

292. Routine use of recombinant erythropoietin in patients of chronic kidney disease obviates the chances of

a) Regular blood transfusions

b) Iron supplementation

c) Dialysis

d) Hyperkalemia

Correct Answer - A

Answer- A. Regular blood transfusions

- Recombinant human EPO and modified EPO products, such as darbepoetin- alpha, has been one of the most significant advances in the care of renal patients since the introduction of dialysis and renal transplantation.
- The routine use of these products has obviated the need for regular blood transfusions in severely anemic CKD patients.
- Frequent blood transfusions in dialysis patients also leads to the development of allo-antibodies that could sensitize the patient to donor kidney antigens and make renal transplantation difficult.
- Adequate bone marrow iron stores should be available before treatment with EPO is initiated.
- For patients on hemodialysis, IV iron can be administered during dialysis.

293. Normocytic normochromic anemia is seen in which of the following?

a) Sideroblastic anemia

b) Pernicious anemia

c) Aplastic anemia

d) Sickle cell disease

Correct Answer - C
Answer- C. Aplastic anemia
Marrow damage

- Infiltration/fibrosis
- Aplasia

Iron deficiency

- Decrease Stimulation
- Inflammation
- Metabolic defect
- Renal disease

294. MDRD (Modification of Diet in Renal Disease) formula for estimation of GFR does not include which of following?

a) Age

b) Sex

c) Race

d) Body weight

Correct Answer - D
Answer- D. Body weight
MDRD Formula includes:
1. Age
2. Sex (Multiply by 0.742 for women)
3. Race (Multiply by l.2l for African Americans)

295. Samogyi effect is -

a) Morning hyperglycemia due to insulin resistance

b) Morning hyperglycemia due to large dose of exogenous insulin

c) Morning hypoglycemia due to large dose of exogenous insulin

d) Evening hypoglycemia due to insulin resistance

Correct Answer - B

Answer- B. Morning hyperglycemia due to large dose of exogenous insulin

- Rebound hyperglycemia, results from excess xogenous insulin, which causes hypoglycemia overnight and stimulates the release to counter regulatory hormones that in turn increase blood glucose levels.

296. Arterial blood gas analysis of a patient reveals - pH 7.2, HCO3 36 mmol/L pCO2 70 mmHg. The abnormality is

a) Respiratory acidosis with metabolic alkalosis

b) Respiratory acidosis

c) Respiratory alkalosis with metabolic acidosis

d) Respiratory acidosis with metabolic acidosis

Correct Answer - A

Answer- A. Respiratory acidosis with metabolic alkalosis

In this patient

- pH → Decreased
- HCO3 → Increased
- PCO2 → Increased
- PCO2 is increased which indicates respiratory acidosis
- HCO3- is increased which indicates metabolic alkalosis
- Thus this is a case of mixed disorder, where respiratory acidosis and metabolic alkalosis exist together.

297. HbA1c control for how much time

a) 2 -3 weeks

b) 3 - 6 weeks

c) 6 - 8 weeks

d) 14 - 18 weeks

Correct Answer - C
Answer- C. 6 - 8 weeks

- The half-life of an erythrocyte is typically 60 days, the level of glycated hemoglobin (HbA1c) reflects the mean blood glucose concentration over the preceding 6-8 weeks.

298. pH 7.49, pCO2 38 mmHg, p02 92 mmHg, HCO3 35, Sa02 97%. Which of the following should not be used in the management of this patient?

a) Hyperventilation

b) Correction of serum potassium levels

c) Correction of extracellular fluid volume contraction

d) Use of dilute hydrochloric acid

Correct Answer - A

Answer- A. Hyperventilation

Suggestive of metabolic alkalosis.

- H+ loss by the stomach or kidneys can be mitigated by the use of proton pump inhibitors.
- The second aspect of treatment is to remove increase in HCO3- reabsorption, such as ECFV contraction or K+ deficiency.
- Isotonic saline is usually sufficient to reverse the alkalosis if ECFV contraction is present.
- Dilute hydrochloric acid (0.1 N HCl) is also effective but can cause hemolysis, and must be delivered centrally and slowly.
- Hemodialysis against a dialysate low in (HCO3-) and high in (Cl-) can be effective when renal function is impaired.

299. Peritoneal dialysis uses which of the following process/ es?

a) Osmosis

b) Diffusion

c) Ultrafiltration

d) All the above

Correct Answer - D
Answer- D. All the above

- The repetitive installation and drainage of dialysis solution into and from peritoneal cavity - uses process of osmosis, ultrafiltration and diftrsion to remove wastes, toxins and fluid from the blood.

300. Hypo-osmotic dehydration is seen in

a) Adrenocortical insufficiency

b) Decreased water intake

c) Chronic renal failure

d) SIADH

Correct Answer - A

Answer- A. Adrenocortical insufficiency

- Loss of salt in excess of water causes hypo-osmotic volume contraction.
- This usually results from adrenocortical insufficiency associated with renal loss of NaCl.
- Aspiration ofgastric secretions can cause hypertonic fluid loss from body.

301. Hyperkalemia is a feature of

a) Conns syndrome

b) Gitelman's syndrome

c) Pseudohypoaldosteronism type 2

d) Liddle syndrome

Correct Answer - C
Answer- C. Pseudohypoaldosteronism type 2
Pseudohypoaldosteronism tnre 2 is associated with hyperkalemia.

- Conns syndrome, Gitelman's syndrome and Liddle syndrome are associated with hypokalemia.

302. Adverse effects of excess potassium intake can be seen in which of the following individuals?

a) Patients with adrenal insufficiency

b) Patients with diabetes mellitus

c) Patients taking angiotensin receptor blockers

d) All the above

Correct Answer - D

Answer- D. All the above

- supplemental potassium can lead to acute toxicity in healthy individuals.
- Indviduals whose urinary potassium is impaired, a potassium intake less than 4.7 g/d appropriate because of adverse cardiac effects (arrhythmias) from hyperkalemia.
- Drugs that commonly impair potassium excretion are, angiotensin converting enzyme inhibitors, angiotensin receptor blockers, and potassium sparing diuretics.
- Conditions associated impaired potassium excretion, are diabetes, chronic renal insufficiency, end stage renal disease, severe heart failure, and adrenal insufficiency.
- Elderly individuals are at increased risk of hyperkalemia.

303. A female presents with swelling in neck, palpitations and exopthalmos, Which of the following is the most likely diagnosis?

a) Oranulomatous thyroiditis

b) Hashimoto thyroiditis

c) Graves disease

d) Mutinodular goitre

Correct Answer - C

Answer- C. Graves disease

- The clinical findings in Graves disease include some changes associated with thyrotoxicosis.
- The ophthalmopathy of Graves disease results in abnormal protrusion of the eyeball (exophthalmos).
- The infiltrative dermopathy, or pretibial myxedema, is most common in the skin overlying the shins.
- Graves disease, such as diffuse hyperplasia of the thyroid.

304. 28 years old male presents with fever, anorexia, nausea, vomiting, headache, photophobia and arthralgias. Liver is enlarged and tender and associated with right upper quadrant discomfort. Which of the following is the most probable diagnosis?

a) Acute viral hepatitis

b) Sickle cell disease

c) Thalasemia

d) Acute lymphocytic lymphoma

Correct Answer - A

Answer- A. Acute viral hepatitis

- Symptoms are anorexia, nausea and vomiting, fatigue, malaise, arthralgias, myalgias, headache, photophobia, pharyngitis, cough.
- Dark urine and clay-colored stools may be noticed by the patient from 1 -5 days before the onset of clinical jaundice.
- The liver becomes enlarged and tender and may be associated with right upper quadrant pain and discomfort.
- Splenomegaly and cervical adenopathy are present.

305. which of the following can be used to differentiate between diabetes mellitus type 1 and 2?

a) Association with All 3/4

b) Presence or absence of insulitis

c) Insulin levels

d) All the above

Correct Answer - D

Answer- D. All the above

Age- <20 years

- Autoimmune destruction of Beta cells mediated by T cells and humoral mediators. Anti islet cell antibodies.
- Islet cells- Early Insulitis, marked atrophy and fibrosis, Beta cell depletion.
- Marked decrease blood insulin.

306. Hepatic secretory function is evaluated using

a) Alkaline phosphatase

b) 5' nucleotidase

c) Gamma glutamyl transpeptidase

d) Prothrombin time (PT)

Correct Answer - D

Answer- D. Prothrombin time (PT)

- The most widely used tests are those measuring the blood concentration of aspartate aminotransferase (AST) and alanine aminotransferase (ALT).
- **Congulation proteins:** The easiest way to estimate the concentration of the coagulation factors is by measuring the prothrombin time (PT), which is normally l0 to 13 seconds. Prolonged PT is a sensitive index of liver function loss.

307. All are seen in MEN IIA syndrome except

a) Medullary carcinoma of thyroid is seen in 100% of the patients

b) 40 - 30% patients have phaeochromocytoms

c) Caused by loss of function mutation in IIRT protooncogene

d) Primary hyperparathyroidism is the most variable feature of MEN II A syndrome

Correct Answer - C

Answer- C. Caused by loss of function mutation in IIRT protooncogene

- MEN-2A or Sipple syndrome, is characterized by pheochromocytoma, medullary carcinoma of the thyroid, and parathyroid hyperplasia.
- Parathyroid hyperplasia and evidence of hypercalcemia or renal stones.
- MEN-2A is clinically and genetically distinct from MEN-I and is caused by germline gain-of-function mutations in the
- RET proto-oncogene on chromosome l0qll.2.
- 40% to 50% have pheochromocytomas.
- Primary hyperparathyroidism is the most variable feature of MEN 2A syndrome.

308. Which antibodies are associated with autoimmune hepatitis type IIa

a) ANA antibody

b) p ANCA

c) Anti histone antibody

d) Anti LKM antibody

Correct Answer - D
Answer- D. Anti LKM antibody
Type II autoimmune hepatitis
Associated with anti LKM
IIa-

- Young women
- High titre anti LKM
- Responds to glucocorticoid.

309. A patient undergoes a lipid profile screening. On withdrawing the blood, it appears white in colour, Which of the following is the most probable elevated lipoprotein?

a) Chylomicrons

b) HDL

c) LPL

d) Cholesterol

Correct Answer - A
Answer- A. Chylomicrons

- White (Lactescent) appearance is caused by chylomicrons.

310. Hypercalcemia related to malignancy is seen in which of the following cancers?

a) Multiple myeloma

b) Lung carcinoma

c) Carcinoma breast

d) All the above

Correct Answer - D
Answer- D. All the above
Malignancy related-

- Solid tumor with metastasis/ paraneoplastic syndrome
- Carcinoma breast/ Lung/ Kidney etc
- Hematological: Multiple myeloma/
- Lymphoma/Leukemia
- Aluminum intoxication
- Milk Alkali syndrome

311. Typical symptom of gastroesophageal reflux disease is

a) Regurgitation

b) Dysphasia

c) Chest pain

d) Cough

Correct Answer - A

Answer- A. Regurgitation

- Heartburn and regurgitation are the typical symptoms of GERD.
- Dysphagia and chest pain.
- Extraesophageal syndrome, with an established association to GERD include chronic cough, laryngitis, asthma, and dental erosions.

312. Bristol chart is used fore

a) Stool consistency

b) Nocturnal enuresis

c) Mental retardation

d) Cognitive development

Correct Answer - A

Answer- A. Stool consistency

The Bristol stool scale(Bristol stool chart (BsC)) is a diagnostic medical tool designed to classifr the form of human feces into seven categories.

The seven types ofstcol are

- Type 1 Separate hard lumps, like nuts (hard to pass); also known as goat faeces
- Type 2: Sausage-shaped but lumpy
- Type 3: Like a sausage but with cracks on its surface
- Type 4: Like a sausage or snake, smooth and soft
- Type 5: Soft blobs with clear cut edges (passed easily)
- Type 6: Fluft pieces with ragged edges, a mushy stool
- Type 7: Watery, no solid pieces, entirely liquid

313. Which of the following is true about Hyperglycemic hyperosmolar state -

a) it is more common in young patients with type 1 diabetes melitus

b) Mental status is not altered in any case

c) There is associated hypertension and tachycardia

d) Kussumaul respirations are characteristic

Correct Answer - D

Answer- D. Kussumaul respirations are characteristic

Hyperglycemic hyperosmolar nonketotic coma

- Notably absent are symptoms of nausea, vomiting, and abdominal pain and the Kussmaul respirations characteristic of DKA.
- This is a life threatening complication of diabetes mellitus characterized by marked hyperglycemia, dehydration, and hyperosmolarity with or without mental obtundation in the absence of significant ketoacidosis.
- The prototypical patient with HHS is an elderly individual with type 2 DM.
- Sepsis, pneumonia, and other serious infections are frequent precipitants.

314. Pitying testing for lower motor neuron lesion involving nucleus ambiguous; uvula

a) Is deviated to the affected side

b) Is deviated to the normal side

c) Remains in midline

d) Is not used in testing

Correct Answer - B

Answer- B. Is deviated to the normal side

- It is the column of cells running almost the entire length of medulla.
- Motor neurons in the nucleus ambiguous innervate the constrictor muscles of the pharynx, muscles of the velopharynx (such as constrictor veli palatine), intrinsic muscle of the larynx, and single muscle of the tongue.
- In case of unilateral lower motor neuron lesion, when the patient phonates the soft palate will raise asymmetrically, with higher elevation on the healthy side and the uvula pulled of the midline in the same direction i.e. it is deviated to the normal unaffected side.

315. Pseudobulbar palsy is seen with

a) Unilateral gortigandbar lesions

b) Bilateral corticobulbar lesions

c) Cranial nerve IX involvement

d) Cranial nerve N involvement

Correct Answer - B

Answer- B. Bilateral corticobulbar lesions

- This pattern of weakness results from disorders that affect the upper motor neurons or their axons in the cerebral cortex, subcortical white matter, internal capsule, brainstem, or spinal cord.
- With corticobulbar involvement, weakness usually is observed only in the lower face and tongue; extraocular, upper facial, pharyngeal, and jaw muscles almost always are spared.
- With bilateral corticobulbar lesions, pseudobulbar palsy often develops: dysarthria, dysphagia, dysphonia, andemotional lability accompany bilateral facial weakness and a brisk jaw jerk.

316. Parinaud syndrome is caused by damage to

a) Anterior commisure

b) Posterior commisure

c) Medial commisure

d) Lateral commisure

Correct Answer - B

Answer- B. Posterior commisure

- Also known as dorsal midbrain syndrome, this is a distinct supranuclear vertical gaze disorder caused by damage to the posterior commissure.
- Pineal region tumors, cysticercosis, and stroke also cause Parinaud's syndrome.

317. Conduction aphasia is classically seen due to lesion in -

a) Arcuate fascicultis

b) Cingulate gyms

c) Bruges area

d) Wernieke̲s area

Correct Answer - A
Answer- A. Arcuate fascicultis

318. Which of the following is true about Wernicke's encephalopathy

a) Extrapyramidal symptoms

b) Auditory hallucinations

c) Vagus nerve palsy

d) Presence of horizontal nystagmus

Correct Answer - D

Answer- D. Presence of horizontal nystagmus

Wernicke's disease is a common and preventable disorder due to deficiency of thiamine.

- It is commonly seen in alcoholic patients with chronic thiamine deficiency.
- Wernicke's encephalopathy is characterized by clinical triad of
- Global confusion
- Ophthalmoplegra

Ataria

- It includes horizontal nystatmus on lateral gaze lateral rectus palsy.

Gait Ataxia

- It results from combination of polyneuropathy, cerebellar involvement and vestibular paresis.

319. Drug of Choice for absence seizure in children < 3 years of age is

a) Ethosuximide

b) Carbamazepine

c) Lamtrigine

d) Phenytain

Correct Answer - A

Answer- A. Ethosuximide

- Ethosuximide is the DOC for absence seizures in children below 3 years of age as Na valproate may cause fulminant hepatitis in children below 3 years of age. Broadly. Na valproate is the DOC for absence seizures.

320. Intetion tremor, druken gait and scanning speech together point towards involvement of

a) Cerebellum

b) Cortex

c) Medulla

d) Micihreio

Correct Answer - A

Answer- A. Cerebellum

Clinical features of Cerebellar lesions:

- Incordination of rapid alternating movements - dysdiadokokinesia
- Inaccuracy of purposeful movements - dysmetria
- Irregular variations in the volume and rhythm ofspeech - scanning speech
- Broad based reeling gait - like a drunken sailor
- Quasirhythmical rocking of the head and trunk - titubation
- Hypotonia
- Nystagmus

321. Intravenous rtPA is indicated in ischemic stroke within how many hours of onset of disease process

a) 1 hour

b) 3 hours

c) 6 hours

d) 12 hours

Correct Answer - B

Answer- B. 3 hours

- The National Institute of Neurological Disorders and Stroke (NINDS) recombinant tPA (rtPA) Stroke Study showed a clear benefit for IV rtPA in selected patients with acute stroke.
- The NINDS study used IV rtPA (0.9 mg/kg to a 90-mg max; l0% as a bolus, then the remainder over 60 minutes) versus placebo in patients with ischemic stroke within 3 hours of onset.

322. Most common cause of death in amyotropic lateral sclerosis is

a) Cardiac failure

b) Respiratory failure

c) Renal failure

d) Liver failure

Correct Answer - B

Answer-B. Respiratory failure

- Amyotrophic lateral sclerosis (ALS) is the most cornmon form of progressive motor neuron disease. It is a prime example of a neurodegenerative disease and is arguably the most devastating ofthe neurodegenerative disorders.
- Respiratory failure is the leading cause of death in amyotrophic lateral sclerosis, and terminal dysnoea is a major fear in patients with amyotrophic lateral sclerosis.

323. Most common cause of lobar hemorrhage in the elderly

a) Coagulopathy

b) Aneurysm

c) Amyloid angiopathy

d) Trauma

Correct Answer - C

Answer- C. Amyloid angiopathy

- Lobar intracerebral hemorrhage is bleeding in the largest part of the brain called the cerebrum.
- Intracerebral hemorrhage are attributed to hypertensive vasculopathy in small penetrating brain arteries and subcortical vessels in patients with amyloid angiopathy.
- Amyloid angiopathn a chronic deposition of congophilic rnaterial in brain vessels, is the most common cause of lobar hemorrhage in older patients.

324. Working memory con be affected due to lesion in -

a) Hypothalamus

b) Thalamus

c) Mammillary body

d) Dorsolateral frontal lobe

Correct Answer - A

Answer- A. Hypothalamus

- Working memory stores items only as long as the information is in consciousness and is either being rehearsed (subvocally) or manipulated in some other fashion (i.e. rotated or integrated with existing information in semantic memory).
- Working memory is highly vulnerable to distraction and sometimes is even called working attention to emphasize the conscious and effortful processes that it entails.
- Lesions that disrupt the structure or function of the dorsolateral frontal or posterior parietal regions decimate working memory.

325. Cerebellar shape in fetus with spina bifida before 24 weeks of gestation mimics which of the following?

a) Banana

b) Orange

c) Swiss cheese

d) Pea

Correct Answer - A

Answer- A. Banana

- In majority ofcases ofspina bifida, the cerebellum is either not detectable sonographically or has a banana shaped appearance.

326.

Anomia is seen in lesions of which part of temporal lobe

a) Posterior part

b) Unctis

c) Inferior temporal lobe

d) Meyers loop

Correct Answer - A
Answer- A. Posterior part

- Uncus part of pyriform lobe
- Posterior part of temporal lobe

327. Which of the following is true about typical absence seizures?

a) Long term lapse in conciousness

b) Profound post ictal confusion

c) Hyperventilation provokes absence seizures

d) Absence seizures originate after 40 yrs of age

Correct Answer - C

Answer- C. Hyperventilation provokes absence seizures

- Typical absence seizures are characterized by sudden, brief lapses of consciousness without loss of postural control.
- The seizure typically lasts for only seconds, consciousness returns as suddenly as it was lost, and there is no post ictal confusion.
- Typical absence seizures are associated with a group of genetically determined epilepsies with onset usually in childhood (ages 4-8 years) or early adolescence.
- Hyperventilation tends to provoke these electrographic discharges and even the seizures themselves and is routinely used when recording the EEG.

328. Aspergillosis can present with all except

a) Lung cavity

b) Ear infection

c) Normal component in sputum

d) Rhinocerebral involvement

Correct Answer - D
Answer- D. Rhinocerebral involvement
Aspergillus is the most common cause of otomycosis (fungal ear infection)

- It has been associated with lung cavities, especially when associated with underlying conditions like TB'
- Aspergillosis does not present with rhinocerebral involvement

329. What are nitrergic neurous ?

a) Post ganglionic neurons releasing nitric oxide

b) 1st order neurons releasing nitric oxide

c) Post ganglionic neurons releasing substance P.

d) 1st order neurons releasing calcitonin Gene related peptide

Correct Answer - B

Answer-B. 1st order neurons releasing nitric oxide

- Nitrergic neurons are nerye cells which have neurotransmitter NO.

330. Incorrect about dementia pugilistica

a) Seen in boxers

b) Difficulty in gait

c) Decreased cognition

d) Nystagmus

Correct Answer - D

Answer- D. Nystagmus

Dementia Pugilistica (DP), otherwise known as'punch-drunk syndrome'or'boxer's dementia," is a form of dementia that originates with repeated concussions or other traumatic blows to the head.

Symptoms of Dementia Pugilistica

- Progressively declining cognitive ability
- Physical tremors
- Difficulty in speech
- Pathological feelings of jealousy or paranoia
- Short-term memory loss
- Loss of physical coordination
- Changes in gait

331. According to revised guidelines of American heart association, which of the following drugs is not recommended in Cardiac arrest

a) Adrenaline

b) Atropine

c) Amiodarone

d) Vasopressin

Correct Answer - B
Answer- B. Atropine

- "Atropine is no longer recommended for PEA or crystale

332. Chronic Fatigue Syndrome is characterized by all except

a) New onset fatigue

b) Not improved by rest

c) Major psychiatric disorder associate

d) Fatigue last for more than 6 mother

Correct Answer - C

Answer- C. Major psychiatric disorder associate

- Fatigue lasts for at least 6 months
- Fatigue is of new or definite onset.
- Fatigue is not the result of an organic disease or ofcontinuing exertion
- Fatigue is not alleviated by rest.
- Fatigue symptoms are soar throat, tender cervical or axilary lymph nodes, muscle pain, pain in several joints, headaches, malaise

333. Ellis curve is seen in -

a) Pheumothorax

b) Pleural effusion

c) Pleural effusion

d) Asthma

Correct Answer - B

Answer- B. Pleural effusion

- Ellis's S-shaped come in pleural effusions does not exist today. Actually, it is a radiologial observation (highest level of fluid in axilla).
- The upper limit of fluid in peural effusion is horizontal like hydropneumothorax.

334. Biot breathing is seen in -

a) Flail chest

b) Uremia

c) High altitude

d) Lesion in the brain

Correct Answer - D
Answer- D. Lesion in the brain
Biot's breathing

- Characterized by irregularly irregular breathing with sudden apnea.
- Seen in CNS lesions.
- Indicates increased intracranial Pressure.

335. 65 yr old man presented with hemoptysis and grade III clubbing. The probable diagnosis of the patient is?

a) Non small cell lung Ca

b) Small cell cancer of lung

c) Tuberculosis

d) Sarcoidosis

Correct Answer - A

Answer- A. Non small cell lung Ca

- Hemoptysis in 65 year old along with grade III clubbing suggests Non small cell carcinoma lung.
- Clubbing in lung cancer is characteristically associated with Non small cell carcinoma lung.

336. In prolactinoma most common symptom other than galactorrhea is

a) Bitemporal hemianopia

b) Amennorhea

c) Thyroid dysfunction

d) Headache

Correct Answer - B

Answer- B. Amennorhea

- Amenorrhoea and galactorrhoea are the major endocrine manifestation of prolactinoma.

337. All of following are seen in GH deficiency except

a) Hyperglycemia

b) Stunting

c) Delayed bone age

d) High pitched voice

Correct Answer - A

Answer- A. Hyperglycemia

- Short children with normal body proportions
- Markely increased subcutaneous fat
- Proportionate growth retardation
- Delayed skeletal age than chronological age than height age is less than skeletal age and chronological age.
- Hypoplastic penis (micropenis) and scrotum
- May present with severe hypoglycemic convulsions.
- Crowding of midfacial features
- Genitals are small (sexual infantilism)
- Frontalbossing
- Delayed puberty
- Delayed tooth eruption
- Delayed epiphyseal fusion
- No mental retardation

338. Hypoxic pulmonary vasoconstriction due to -

a) Irreversible pulmonary vasocontriction hypoxia

b) Reversible pulmonary vasoconstriction due to hypoxia

c) Direct blood to poorly ventilated areas

d) Occurs hours after pulmonary vasoconstriction

Correct Answer - B

Answer- b. Reversible pulmonary vasoconstriction due to hypoxia

- Hypoxic pulmonary vasoconstriction (HPV) is an adaptive vasomotor response to alveolar hypoxia which redistributes blood to optimally ventilatid lung segments by an active process of 'vasoconstriction, particularly involving the small muscular resistance pulmonary arteries (PA).

339. ROME III criteria for Irritable bowel syndrome AE

a) Improvement with defection

b) Rectal bleeding

c) Onset associated with change in frequency of stool

d) Onset associated with change in form of stool

Correct Answer - B

Answer- B. Rectal bleeding

ROME II Diagnostic Criteria for Functional Bowel Disorders-

- Irritable Bowel Syndrome
- Functional Abdominal Bloating
- Functional Constipation
- Functional Diarrhea
- Unspecifed Functional Bowel Disorder

340. A female has a SBP = 130 mm Hg and DBP = 100 mm Hg on two consecutive occasions, Best treatment is -

a) Rest

b) Sedative

c) Anti-hypertensive drugs

d) Error in BP Machine

Correct Answer - C

Answer- C. Anti-hypertensive drugs

- Treatment dth antihypertensive is wanted in all patients uith isolateral diastolic hypertension who have evidence of end organ damage most experts also suggest the use of antihypertensive drugs in patients without end organ datnage.

341. A patient presented with deficiency of thiamine. What could be possible outcome ?

a) Delayed wound healing

b) Cardiac abnormality

c) Memory loss

d) Gingival bleeding

Correct Answer - B

Answer- B. Cardiac abnormality

1. Wet beriberi: Cardiovascular symptoms with high-output CHF.
2. Dry beri beri: Motor and sensory neuropathy.

342. Obesity is associated with decreased risk of

a) Hypertension

b) Hyperuricemia

c) Osteoporosis

d) Heart disease

Correct Answer - C
Answer- C. Osteoporosis

343. Al year old male child is having a Heart Rate 40/min. BP 90/60. His serum Potassium = 6.5. What is the next best management -

a) Ipratropium

b) Adrenaline

c) Sodium bicarbonate

d) Calcium gluconate

Correct Answer - D

Answer- D. Calcium gluconate

- Calcium gluconate is the fastest acting agent among the agents used in the t/t of hyperkalemia.
- It acts within minutes but an important point to note is that it does not cause transcelluler movement of potassium, instead it acts on cardiac cell membrane.

344. Which one of the following serum levels would help in distinguishing an acute liver disease from chronic liver disease

a) Aminotransaminase

b) Alkaline phosphatase

c) Bilirubin

d) Albumin

Correct Answer - D

Answer- D. Albumin

- Serum albumin has a long half life 15-20 days with approximately 4% degraded per day

345. Isolated deletion of which chromosome causes myelodysplastic syndrome -

a) 2q

b) 5q

c) 8q

d) 11 q

Correct Answer - B

Answer- B. 5q

- MDS is frequently associated with chromosomal abnormalities including monosomy 5 and 7, deletion of 5q and 7q, trisomy 8 and deletion of 20q.

346. Transtentorial herniation causes all except

a) Neck stiffness

b) Post cerebral artery infarct

c) Contralateral hemeiparesis

d) 3rd Nerve palsy with contralateral pupillary dilatation

Correct Answer - A

Answer- A. Neck stiffness

- Transtentorial herniation is the displacement of medial temporal lobe into the tentorial opening it is usually seen after extradural hemorrhage.
- Compression of optic nerve : Ipsilateral pupil dilation

347. Apheresis is -

a) Selective separation of components of blood

b) Preventing blood transfusion infections [HIV, HBV]

c) Separation of platelets from plasma

d) Isolating organisms from mixed culture

Correct Answer - A

Answer- A. Selective separation of components of blood

- Apheresis is the general technique of extracorporeal blood purification whereby one constituent is removed and the remainder is returned to the patient.

348. Candle wax dripping sign is seen in

a) Sarcoidosis

b) SLE

c) HIV

d) Rheumatoid arthritis

Correct Answer - A

Answer- A. Sarcoidosis

- Condle wax chipping sign is a feature of occular Sarcoidosis.

349. Hemiballismus is due to lesion in

a) Ipisilateral caudate nucleus

b) Contralateral sub-thalamic lesion

c) Contralateral putamen

d) Ipsilateral sub-thalamic lesion

Correct Answer - B
Answer- B. Contralateral sub-thalamic lesion

- Sub-thalamic nucleus- Contralateral hemiballismus

350. Two point discrimination test exhibits maximum sensitivity in -

a) Toes

b) Shin

c) Finger pads

d) Soles

Correct Answer - C
Answer- C. Finger pads
Most sensitive areas for two point discrimination

- Tip of the tongue
- Finger tips

351. Heavy chain disease with kapppa light chains in urine -

a) Mu chain disease

b) Seligman disease

c) Franklin disease

d) waldenstrom macroglobulinemia

Correct Answer - A
Answer- A. Mu chain disease

- Mu HCD: Mu chain with associated light chain.

352.

The submerged part of cerebral cortex is

a) Insula

b) Broadman area

c) Corpus collosum

d) Pirform sulcus

Correct Answer - A
Answer- A. Insula
Functions of insula

- Insula provides an emotional context that is suitable for a given sensory experience.
- It has also been shown to be associated with pain processes as well as with several basic emotions such as anger, fear, disgust, joy.

353. ADAMTS deficiency is seen in -

a) Essential thrombocythemia

b) ITP

c) Thrombotic thrombocytopenic purpura

d) CLL

Correct Answer - C

Answer- C. Thrombotic thrombocytopenic purpura

- Patients with TTP are deficient in an enzyme called ADAMTS (This enzyme is ako known as vWF metalloprotease).

354. Incorrect about dementia pugilistica

a) Seen in boxers

b) Difficulty in gait

c) Decreased cognition

d) Nystagmus

Correct Answer - D

Answer- D. Nystagmus

Dementia Pugilistica (DP), otherwise known as'punch-drunk syndrome'or'boxer's dementia," is a form of dementia that originates with repeated concussions or other traumatic blows to the head.

Symptoms of Dementia Pugilistica

- Progressively declining cognitive ability
- Physical tremors
- Difficulty in speech
- Pathological feelings of jealousy or paranoia
- Short-term memory loss
- Loss of physical coordination
- Changes in gait

355. All are true about Diabetes insipidus except?

a) Low urine osmolality

b) Dilutional Hyponatremia

c) Water deprivation test is used for diagnosis

d) Polyuria

Correct Answer - B

Answer- B. Dilutional Hyponatremia

- In diabetes insipidus, the serum osmolality is increased with inappropriately low urine osmolality.
- There is polyuria, as ADH deficienry causes excessive water loss in urine.

356.

A patient is unable to solve mathematical calculations, which part of his brain is damaged?

a) Temporal lobe

b) Frontal lobe

c) Parietal lobe

d) Occipital lobe

Correct Answer - C

Answer- C. Parietal lobe

Features ofparietal lobe lesions :-

- Dominant hemisphere: - Dysphasia/Aphasia, Dyscalculia, dyslexia, Apraxia, Gerstmann syndrome.
- Non-dominant hemisphere : - Hemineglect, extinction phenomenon, spatial disorientation, constructional & dresing apraxias, anosagnosia.

357. All are correct about SIADH except :

a) Normal KFT

b) Low uric acid

c) Relative hypernatremia

d) Normal BP with gain of water

Correct Answer - C

Answer- C. Relative hypernatremia

- Serum potassium and Bicarbonate levels are normal in SIADH (hypokalemia and metabolic acidosis suggests, diuretic therapy or vomiting) Hyponatremia, Decreased serum osmolality

358. Pure word blindness occurs due to lesion in

a) Anterior cerebral artery

b) Posterior cerebral artery

c) Middle cerebral artery

d) Spinal artery

Correct Answer - B

Answer- B. Posterior cerebral artery

- Pure alexia almost always involves an infarct to the left posterior cerebral artery which perfuses the splenium of the corpus callosum and left visual cortex, among other things)

359. CSF is absorbed by -

a) Choroid plexus

b) Sub-arachnoid granulations

c) Dura matter

d) Pia matter

Correct Answer - B

Answer- B. Sub-arachnoid granulations

- CSF is produced by the choroid villi in the lateral ventricles and third ventricles.
- CSF is reabsorbed via the arachnoid granulations back into the blood stream.

360. Cranial Nerve 8 palsy causes all EXCEPT:

a) Gag reflex

b) Vertigo

c) Motion sickness

d) Tinnitus

Correct Answer - A
Answer- A. Gag reflex
Gag-reflex is for 9th cranial nerve.

- Clinical features of 5th cranial nerve damage are -

1. Cochlear part: - Hearing loss (deafness), Tinnitus
2. Vestibular part: - Vertigo, Balance disturbances

361. Which of the following is not a test for integrity of 9th and 10th nerve -

a) Position of uvula

b) Palate symmetry

c) Taste

d) Tongue Protusion

Correct Answer - D
Answer- D. Tongue Protusion

- Protusion of the tongue is used for the assessment of the twelth cranial nerve.

362. Vitum's sign is seen in -

a) Tricuspid Regurgitation

b) Mitral Stenosis

c) Aortic Stenosis

d) Aortic Regurgitation

Correct Answer - A

Answer- A. Tricuspid Regurgitation

- Increase in intensity of the murmur on pressing the liver is celled vitum's sign.
- It is associated with "Vitum's sign".

363. Cavallo's sign is seen in -

a) Tricuspid Regurgitation

b) Mitral Stenosis

c) Aortic Stenosis

d) Aortic Regurgitation

Correct Answer - A
Ans. A. Tricuspid Regurgitation

364. Carvallo's sign representing a Diastolic Murmur that increases on inspiration is seen in -

a) Tricuspid Stenosis

b) Tricuspid Regurgitation

c) Mitral Stenosis

d) Aortic Regurgitation

Correct Answer - A

Answer- A. Tricuspid Stenosis

- Carvallo's meneuever is also associated with tricuspid stenosis.
- In tricuspid stenosis diastolic murmur is accentuated during inspiration whereas in T.R. pan systolic murmur is accentuated during inspiration.

365. What is the minimum number of Red Blood Cells /til of urine required for diagnosis of hematuria ?

a) 3 RBC/pL

b) 5 RBC/pL

c) 8 RBC/pL

d) 10 RBC/pL

Correct Answer - A

Answer- A. 3 RBC/pL

- Mircoscopic hematuria is defined as the praence of three or more red blood cells per high- power field on microscopic evaluation of urinary sediment from two of three properly collected urinalysis specimens.

366. Giant cell arteritis causes which of the following in the eye -

a) Episcleritis

b) Anterior ischemic optic neuropathy

c) Neuroparalytic keratitis

d) Band keratitis

Correct Answer - B

Answer- B. Anterior ischemic optic neuropathy

Causes of vision loss

- Anterior ischemic optic neuropathy.
- Central retinal artery occulusion.
- Posterior ischemic optic neuropathy.
- Branch vetinal artery occlusion
- Cerebral ischemia

367. Tietze's syndrome usually develops at costal cartilage -

a) First and Second ribs

b) Second to fifth ribs

c) Sixth to Eighth

d) All seven ribs

Correct Answer - B

Answer- B. Second to fifth ribs

- Tietze syndrome is characterized by mild to severe localized pain and tenderness in one or more of the upper four ribs.
- The second or third ribs are most oftm affected

368. Which of the following drugs is MOST suitable for a 45-year old diabetic with blood pressure 150/95 mmHg?

a) Lisinopril

b) Amlodipine

c) Propranolol

d) Hydrochlorothiazide

Correct Answer - A

Answer- A. Lisinopril

- An ACE inhibitor is the f.rst choice for comorbid diabetes and renal disease and angiotensin II receptor blocker is the first choice for comborbid L.V.H.

369. A male patient presents with headache, profuse sweating and palpitations with a blood prssure of 180/120 mmHg. The drug of choice would be -

a) Nifedipine

b) Labetalol

c) Prazocin

d) Phenoxy benzamine

Correct Answer - D

Answer- D. Phenoxy benzamine

- Symptoms of the patient suggests pheochromocytoma .
- The drug of choice for pheochromocytomas is phenoxybenzamine

370. The protein which has structural homology with plasminogen and is responsible for myocardial infarction and stroke -

a) HDL

b) LP(a)

c) LDL

d) Homocysteine

Correct Answer - B

Answer- B. LP(a)

- Lp(a) has structural homology to plasminogen because of apoprotein(a) of Lp(a).

371. WHO Rose Questionnaire is used for -

a) Alcohol Addiction

b) Angina Assessment

c) DVT Assessment

d) Arrhythmia Assessment

Correct Answer - B
Answer- B. Angina Assessment

- The Rose Questionnaire is used for assessment of coronary artery disease/angina/Ml.

372. Hypomagnesaemia presents with all except -

a) Symptoms same as hypocalcaemia

b) Development of torsades de pointes

c) Potentiates hypocalcaemia

d) Seen in diabetic ketoacidosis

Correct Answer - D

Answer- D. Seen in diabetic ketoacidosis

- Hypocalcemia is often observed in patients with magnesium deficiency and may contribute to the clinical findings.
- Hypomagnesemia may cause prolonged QT and Torsades-de-pointes.
- DKA is associated with hypermagnesemia.

373. Heart block is seen in -

a) Hypermagensemia

b) Hypomagnesemia

c) Hypernatremia

d) Hypocalcemia

Correct Answer - A

Answer- A. Hypermagensemia

- Hypermagnesemia slows the heart and leads to heart block.

374. Most common cause of death in measles ?

a) Encephalitis

b) Meningitis

c) Dehydration

d) Pneumonia

Correct Answer - D
Answer- D. Pneumonia

- Most commot cause of death in measles is pneumonia

375. Most common extra-cutaneous manifestation of chicken pox is -

a) CNS involvement

b) Varicella pneumonia

c) Congenital varicella

d) Reye syndrome

Correct Answer - A

Answer- A. CNS involvement

- The most common extracutaneous site of involvement in chicken pox in children is the CNS
- The cerebrospinal fluid (CSF) contains lymphoctyes and elevated levels of protein.

376. Dialysis patients are prone to develop -

a) Lead toxicity

b) Iron toxicity

c) Aluminium toxicity

d) Zinc toxicity

Correct Answer - C

Answer- C. Aluminium toxicity

- Aluminium intoxication is common in dialysis patients.
- It can cause anemia, osteomalacia and encephalopathy (dementia).

377. Dementia in patient of chronic renal failure with chronic hemodialysis is due to -

a) Aluminium toxicity

b) Uremia

c) A Beta, amyloid

d) A beta amyloid deposition

Correct Answer - A

Answer- A. Aluminium toxicity

- Patients undergoing long-term dialysis acquire dialysis encephalopathy (or dialysis dementia), which is a subacute, progressive,and often fatal disease.
- Aluminium toxicity either from aluminium phosphate salts or from aluminium in the dialysate were linked to the pathogenesis of dialysis dementia.

378. An adult patient presents with normal or enlarged kidneys with massive proteinuria. Most likely cause is -

a) Chronic pyelonephritis

b) Chronic glomerulonephritis

c) Amyloidosis

d) Renal artery stenosis

Correct Answer - C
Answer- C. Amyloidosis
Amyloidosis causes :-
1. Enlarged kidney
2. Massive proteinuria (nephrotic range proteinuria)

379. All of the following is NOT a feature of an exudate?

a) Serum : Pleural Albumin ratio < 1.2mg/dl

b) Pleural fliud cholesterol > 55

c) Fluid : Serum Protein ratio > 0.5

d) Fluid : Serum LDH ratio > 0.6

Correct Answer - A

Answer- A. Serum : Pleural Albumin ratio < 1.2mg/dl

1. Pleural fliud cholesterol > 55
2. Fluid : Serum Protein ratio > 0.5
3. Fluid : Serum LDH ratio > 0.6

380. Following cranial nerve is involved in patients with sarcoidosis -

a) I cranial nerve

b) VII cranial nerve

c) III cranial nerve

d) IV cranial nerve

Correct Answer - B

Answer- B. VII cranial nerve

- The most common mainfestation is cranial neuropathy with B/L or U/L seventh nerve Bell palsy.

381. Psychosis in SLE is caused by -

a) Anti-ribosomal P antibody

b) Anti-glutamate acid decarboxylase antibody

c) Anti-endomyosial antibody

d) Anti-histone antibody

Correct Answer - A
Answer- A. Anti-ribosomal P antibody

- Anti-ribosomal P antibody- CNS lupus

382. The term 'ragged red fibers' is applied to describe the skeletal muscle fibers in -

a) Myotonic dystrophy

b) Nemaline myopathy

c) Spinal muscular atrophy

d) Mitochondrial myopathy

Correct Answer - D

Answer- D. Mitochondrial myopathy

- The term 'ragged redfibers' is typically applied to describe the skeletal muscle fibers in mitochondrial myopathy.

383. Insensible losses of water per day are -

a) 400 ml per day

b) 600 ml per day

c) 800 ml per day

d) 1500 ml per day

Correct Answer - C
Answer- C. 800 ml per day

384. Romana's sign is seen in -

a) Toxoplasma

b) Trypanosoma cruzi

c) Loa loa

d) Wuchereria

Correct Answer - B

Answer- B. Trypanosoma cruzi

- The classic finding in acute Chagas disease, which consists of unilateral painless edema of the palpebrae and periocular tissues can result when the conjunctiva is the portal of entry.

385. Dialysis disequalibrium occurs due to -

a) Cerebral edema

b) Hypertension

c) Alumunium toxicity

d) A P2 amyloid deposition

Correct Answer - A
Answer- A. Cerebral edema
Dialysis disequilibrium -

- This occurs during first few weeks of dialysis and is associated with rapid reduction in blood urea levels.
- It manifests clinically with nausea, vomiting, drowsiness, headache and rarely seizures.
- This syndrome has been attributed to cerebral edema & increased intracranial pressure due to the rapid (dialysis induced) shift of osmolity and pH between extracellular and intracellular fluids.

386. Which of the following is the most specific test for rheumatoid arthritis ?

a) Anti- MCV antibody

b) Anti cardiolipin antibody

c) Anti Mi-2 antibody

d) Anti Ro antibody

Correct Answer - A

Answer- A. Anti- MCV antibody

- The newly developed antimutateil citruIlinated vimenti (Anti MCV assay) have been tasted for the diagnosis of P.A.
- Their main advantage is early appearance making early detection of R.A.
- Anti MCV antibodies show strong conehtion with the disease activity, disease severity aqd the success of therapy.

387. Storage temperature of platelet is -

a) - 4° C

b) + 4 ° C

c) - 20 ° C

d) + 20-24° C

Correct Answer - D

Answer- D. + 20-24° C

- Platelets are stored at room temperatures because cold induces clustering of Von Willebrand factor receptors on the platelet surface.

388. Polyuria with low fixed specific gravity urine is seen in ?

a) Diabetes mellitus

b) Diabetes insipidus

c) Chronic glomerulonephritis

d) Potomania

Correct Answer - C

Answer- C. Chronic glomerulonephritis

- Polyuria with fixed low specific gravity is a feature of chronic glomerulonephritis.

389. DOC for treatment of SSPE -

a) Abacavir

b) Inosine pranobex

c) Glatiramer

d) Interferon

Correct Answer - B

Answer- B. Inosine pranobex

- Inosine pranobex is used as an immune-modulator for the management of patients with-
- Immune-depression sufereing from viral infections as SSPE recurrent herpes simplex genital warts.

390. True statement about Neuro-cysticercosis is -

a) Usually presents with seizures

b) Albendazole is more effective than praziquantel

c) Usually presents with 6th nerve palsy and hemiparesis

d) High does steroid are given for hydrocephalus

Correct Answer - A

Answer- A. Usually presents with seizures

- Most common site of neurocysticercosis is brain parenchyma.
- "Parenchymal brain calcifications are the most common fnding of neurocysticercosis on neuroimaging.

391. Test predicting the return of renal function in a patient with tumor lysis syndrome is ?

a) Serum creatinine

b) Serum phosphate

c) Serum potassium

d) Serum Uric acid

Correct Answer - D

Answer- D. Serum Uric acid

- The prognosis of tumor lysis syndrome is excellent, and renal function recovers after the uric acid level is lowered to < l0 mg/dl.

392. Initial treatment of tumor lysis syndrome is -

a) Rasburicase + Hydration + K binder + Urinary alkalization

b) Allopurinol + Hydration + K binder + alkalization

c) Both rasburicase + Allopurinol + Hydration and K binder

d) Hydration alone is sufficient

Correct Answer - A

Answer- A. Rasburicase + Hydration + K binder + Urinary alkalization

- Allopurinol is used in prophylaxis in low and intermediate risk. Examinar is asking about treatment, in which rasburicase is used.

393. The primary involvement of which organ is so far not reported to be affected by sarcoidosis is -

a) Heart

b) Adrenals

c) Kidney

d) Brain

Correct Answer - B

Answer- B. Adrenals

- Involvement of the adrenal glands rarely occurs in sarcoid.osk.
- The functional status of the adrenal gland in patients with sarcoidosis has nearly always been normal when evaluated after stimulation with exogenous ACTH,with the exception of patients with secondary adrenal failure due to hypothalnmic-pituitary infiltration by sarcoid granulomas

394. All of the following are features of moscheowitz triad in Pericardial effusion, except

a) Widening of the cardiac sillhouette

b) Bunting of cardiophrenic angle on the right side

c) An increase in cardiac dullness in the second intercostal space

d) An abrupt transition of pulmonary resonance to cardiac dullness

Correct Answer - B

Answer- B. Bunting of cardiophrenic angle on the right side
Widening of the cardiac silhouette (widening of cardiac flatnest to percussion).

- Widening or increae in cardiac dullness in the second intercostal space; and
- An abrupt transition of pulmonary resonance to cardiac dullness

395. A patient presents with recurrent episodes of sharp pain over his right cheek that is precipitated on chewing. Between attacks patients is otherwise normal.
The most probable diagnosis is -

a) Preherpetic neuralgia

b) Trigeminal neuralgia

c) Mumps

d) Thalamic syndrome

Correct Answer - B
Answer- B. Trigeminal neuralgia

396. Auenbrugger's sign is seen in

a) Pericardial Effusion

b) Constrictive pericarditis

c) Aortic Regurgitation

d) Mitral Stenosis

Correct Answer - A
Answer- A. Pericardial Effusion
Friedreich's sign

- Pitres's sign
- Auenbrugger's sign

Sansom's sign

- Greene's sign
- Ewart's sign
- Ebstein's sign
- Rotch's sign

Moschcowit's sign

- Ewart's second sign
- Dressle's sign
- Bamberger's sign

397. Bony erosion are seen in the following except -

a) Gout

b) Psoriasis

c) SLE

d) Osteoarthritis

Correct Answer - C
Answer- C. SLE

- Rheumatoid afihritis
- Gouty arthritis- lst MTP
- Pseudogout knee (Calcium phyrophosphate crystal deposition)
- Psoriatic arthritis
- Ankylosi ng spondylitis
- OA

398. Treatment of choice in Wegner's granulomatosis is

a) Cyclosporine

b) Cyclophosphamide

c) Steroids

d) Radiotherapy

Correct Answer - B

Answer- B. Cyclophosphamide

- Cyclophosphamide alongwith glucocorticoids is the treatment of choice, For selected patients whose disease is not immediately life threatening or in those patients who have experienced significant cyclophosphamide toxicity, methotrexate together with glucocorticoids may be considered as an alternative

399. Shohl's solution is -

a) Sodium citrate

b) Potassium binding resin

c) Lugol iodine

d) Radio-iodine

Correct Answer - A

Answer- A. Sodium citrate

- Sodium citrate (Shohl's solution) or NaHCO: tablets (650-mg tablets contain 7.8 mEq) are equally effective alkalinizing salts.
- Citrate enhances the absorption of aluminum from the gastrointestinal tract and should never be ginen together with aluminum containing antacids because of the risk of aluminum intoxication.

400. Rademecker complex in EEG is seen in -

a) SSPE

b) vCJD

c) cCJD

d) Kuru

Correct Answer - A

Answer- A. SSPE

- Characteristic periodic activity (Rademecker complex) is seen on EEG showing widespread cortical dysfunction in SSPE.
- It is characterised by high voltage spike occuning at higlr lrequency of 0.5- 1.5 seconds.

401. The number of Neurofibromas as one of the diagnostic criteria for adult neurofibromatosis type-I

a) 1

b) 2

c) 4

d) 6

Correct Answer - B
Answer- B. 2

402. Pulmonary Apoplexy is seen in -

a) Mitral Stenosis

b) Mitral Regurgitation

c) Aortic Stenosis

d) Aortic regurgitation

Correct Answer - A

Answer- A. Mitral Stenosis

- Pulmonary apoplexy refers to sudden severe haemoptysis that may be seen in patieats with Mitral Stenosis from rupture of a bronchial vein.

403. The number of café au lait macules as one of the diagnostic criteria for adult neurofibromatosis is

a) 1

b) 2

c) 4

d) 6

Correct Answer - D

Answer- D. 6

- l.5 cm orlarger in individuals past puberty
- 0.5 cm or larger in individuals before puberty.

404. Most common presentation of cardiac lupus ?

a) Myocarditis

b) Pericarditis

c) Aortic regurgitation

d) Libman sacks endocarditis

Correct Answer - B

Answer- B. Pericarditis

- Heart (lupus calditis) → Pericarditis (most common), myocarditis, endocarditis, pericardial effusion, coronary artery disease.

405. Charcot's joint in diabetes affects commonly -

a) Shoulder joint

b) Knee joint

c) Hip joint

d) Tarsal joint

Correct Answer - D
Answer- D. Tarsal joint

- Tabes dorsalis → Knees, hip & ankles

406. Useless hand of oppenheim was described for

a) Multiple sclerosis

b) Median nerve palsy

c) Ulnar nerve palsy

d) All of the above

Correct Answer - A

Answer- A. Multiple sclerosis

- Useless Hand of oppenheim was described in Multiple sclerosis

407. Osmotic demyelination syndrome develops due to rapid correction of hyponatremia at a level exceeding?

a) 0.5 mEq/hr

b) 2 mEq/hr

c) 5 mEq/hr

d) 10 mEq/hr

Correct Answer - A

Answer- A. 0.5 mEq/hr

- In patients who are treated to increase the serum sodium, the goal of initial therapy is to raise the serum sodium concentration by 4 to 6 meq/L in a 24-hour period.

408. Vanishing tumor is seen in

a) Liver

b) Lung

c) Bone

d) Heart

Correct Answer - B

Answer- B. Lung

- Accumulation of fluid in the interlobar spaces of the lung (as a result of CHF) appears as a neoplasm on a radiograph.
- It is called as Phantom tumor or pseudotumor or vanishing tumor.

409. Concentration of urea in a patient is 52 mg/dL. What is the serum Blood Urea Nitrogen?

a) 24.3

b) 34.5

c) 41.9

d) 69-7

Correct Answer - A

Answer- A. 24.3

- Serum Blood Urea Nitrogen (BUN): it is the mass of nitrogen within the urea/ unit volume.
- Urea= BUN * 2.14= 24.3 mg/dL

410. Most common presentation of sick euthyroid state -

a) Low T3 with normal T4

b) Low T3 with low T4

c) Low T3 with high T4

d) High T3 with high T4

Correct Answer - A

Answer- A. Low T3 with normal T4

- The most common hormone pattern in sick euthyroid syndrome (SES) is a decrease in total end unbound T3 levekl(low T3 syndtome) with normal levels of T4 aad TSH.

411. Features of Gegenhalten are all exept

a) It is voluntary opposition by patient to passive movement of limb

b) It is stiffening of limb in response to contact

c) Strength of antagonists remains the same as examiner uses increased force to change limb position

d) It is present throughout the range of motion

Correct Answer - C

Answer- C. Strength of antagonists remains the same as examiner uses increased force to change limb position
It is ako called paratonia or paratonic rigidity.

- It is the voluntary opposition of patient to passive movement of limb.
- It is the movement of the limb to counteract any movement made by the examiner.
- The resistance offered to passive movement is variable and fluctuating in nature.
  Patient is unable to relax a group of muscles on command due to inattentiveness.
- Strength of antagonists increases as examiner uses increasing force to change the limb position.
  Resistance is present throughout the range of motion.
- It is also described as stifening of limb in response to contact.
- It is a sign of bilateral frontal lobe dysfunction" especially mesial cortex and superior convexity

412. Myxoedema coma is treated with -

a) Hydrocortisone

b) Liothyronine

c) Levothyroxine

d) All of the above

Correct Answer - D
Answer- D. All of the above

- Administer thyroxine 200 to 400 mg (0.2 to 0.4 mg) intravenously followed by daily doses of 50 to 100 mg,. and triiodothyronine 5 to 20 mg intravenously followed by 2.5 to l0 mg ever)) S hours.

413. Positive nitrogen balance is seen in

a) Growing children

b) Acute illness

c) Scurvy

d) Osteomalcia

Correct Answer - A

Answer- A. Growing children

- Nitrogen balance means the amount of nitrogen lost in 24 hr period is equal to that consumed during this period i.e. the patient is in state of nitrogen balance.
- Normally positive nitrogen balance is sem in growing children, convalescing patients and pregnant woman

414. The complication of diabetes which cannot be prevented by strict control of blood sugar is

a) Amyotrophy

b) Nerve conductivity

c) Macular edema

d) Microalbuminuria

Correct Answer - C

Answer- C. Macular edema

- Reduced nonproliferative and proliftrative retinopathy
- Microalbuminuria
- Clinical nephropathy
- Neuropathy
- Improved glycemic control

415. Pulfrich effect is seen in -

a) Multiple sclerosis

b) Gullian Barre syndrome

c) Parkinson's disease

d) Alzheimer's disease

Correct Answer - A

Answer- A. Multiple sclerosis

- The Pulfrich effect is a sign of optic neuritis seen in patients with Multiple sclerosis.
- The Pulfrich effect is a psychophysical percept wherein a two dimensional lateral motion of an object in the fietd of view is interpretd by the visual cortex as having a depth component (three dimensional), due to a relative difference in signal timings between the two eyes.

416. Dawson's fingers are seen in

a) Multiple sclerosis

b) Multiple myeloma

c) Freidreich's ataxia

d) SACD

Correct Answer - A
Answer- A. Multiple sclerosis

- Dawson's fingers on MRI scans are diagnostic of Multiple Scerlosis

417. "Hour-glass" shape of the chest and "tri-radiate pelvis" are seen radiologically in -

a) Thyrotoxicosis

b) Myxedema

c) Osteomalacia

d) Hyperthyroidism

Correct Answer - C
Answer- C. Osteomalacia
Acetabuli protrusio

- Looser's zone (pseudofracture)

Decreased bone density

- Triadiate pelvis (females)

418. In giardiasis malabsorption is due to all except

a) Loss of brush border enzymes

b) Bacterial overgrowth

c) Lactose intolerance

d) Hypogammaglobulinaemia

Correct Answer - A

Answer- A. Loss of brush border enzymes

- Giardia causes diarrhea and malabsorption. Malabsortion is due to loss of brush border enzyme activities, which cause fat malabsorption (steatonhea) and vitamin deficiency.
- There may be abdominal pain, bloating, nausea & vomiting flatulence and flatts.

419. Jansen disease is?

a) Defect of PTH receptor

b) Defect of GH receptor

c) Defect of GHRH receptor

d) Defect of ADH receptor

Correct Answer - A

Answer- A. Defect of PTH receptor

- Jansen syndrome occurs due to activating mutations in the TH/PTHrp receptor (pTH1R).
- Rare autosomal dominant syndrome

420. Volcano ulcers in esophagus are seen in

a) Herpetic esophagitis

b) Candida esophagitis

c) Apthous ulcer in crohn

d) HIV esophagitis

Correct Answer - A

Answer- A. Herpetic esophagitis

- The ulcers of herpes esophagitis can haye a punctate, linear, stellate, or volcano-like appearance, often with a thin halo fo edemaat the margins.
- The ulcers may be clustered together or widely separated with normal intemening mucosa.

421. Shelf life of platelets to blood bank is

a) 5 days

b) 7 days

c) 10 days

d) 21 days

Correct Answer - A

Answer- A. 5 days

- Platelets are approved by FDA for stored upto 5days at 20-24 (RoomTemperature) because of risk of bacterial contamination.

422. Pemberton sign in seen in ?

a) Retrosternal goiter

b) Grave opthalmopathy

c) Thyroid crisis

d) Addisonian crisis

Correct Answer - A

Answer- A. Retrosternal goiter

- The pemberton maneuver is a physical examination method that elicits manifestations of latent increased pressure in the thoracic inlet by altering arm position to further marrow the aperture.

423. Platelets transfusion must be completed in how many hours after entering the bag

a) 1 hour

b) 2 hour

c) 3 hour

d) 4 hour

Correct Answer - D

Answer- D. 4 hour

- Once the blood bag is opened hy puncturing one of the sealed ports, the platelets must be administered within 4 hours

424. Differential diagnosis of Botulism are all except -

a) GB syndrome

b) Myasthenia gravis

c) Lambert Eaton syndrome

d) Clostridial myonecrosis

Correct Answer - D
Answer- D. Clostridial myonecrosis

- Guillain-Bare syndrome
- Eaton-Lambert syndrome
- Myasthenia gravis
- Tick paralysis
- Stroke syndromes

425. Shelf life of blood in a blood bank in CPDA buffer

a) 21 days

b) 30 days

c) 35 days

d) 42 days

Correct Answer - C
Answer- C. 35 days

- Citrate phosphate dextrose-adenine (CPD-A)- 35 days

426. Ice pack test is due for

a) Myesthenia gravis

b) Multiple system atrophy

c) Hyperparathyroidism

d) Hypokalemic periodic paralysis

Correct Answer - A

Answer- A. Myesthenia gravis

- The ice pack test is a bedside test to help in the diagnosis of myethenia gravis

427. High urinary chloride is seen in all except ?

a) Barter syndrome

b) Gitelman syndrome

c) Vomiting

d) Thiazide

Correct Answer - C

Answer- c. Vomiting

- In vomiting since the patient is developing dehydration the resultant R.A.A.S stimulation leads to increase of aldosterone and metabolic alkalosis ensues.

428. Which of the following is the correct full form of APACHE' ?

a) Acute pulmonary and cardiac health evauation

b) Acute physiology and chronic health evaluation

c) Adult pediatric and cardiac health evaluation

d) Adolescent pediatric and child health evaluation

Correct Answer - B

Answer- B. Acute physiology and chronic health evaluation

- APACHE is a severity-of-disease classification system and stands for 'Acute Physiology and Chronic Health Evaluation.

429. A patient with Hypertension presents with Hypokalemia. Aldosterone levels and Renin levels are both elevated. The most likely diagnosis is

a) Renal Artery stenosis

b) Primary Hyperaldosteronism {Conn's syndrome}

c) Addison's disease

d) Cushing's syndrome

Correct Answer - A

Answer- A. Renal Artery stenosis

- The association of High aldosterone and High Renin levels in a hypertensive patient with hypokalemia suggests a diagnosis of
- Secondary Hyperaldosteronism of from Renal Artery Stenosis.

430. Dawson disease is

a) SSPE

b) Acute disseminated encephalomyelitis

c) Neuromyelitis optica

d) Paralysis agitans

Correct Answer - A
Answer- A. SSPE

- SSPE is ako known as Dawson encephalitis and measles encephalitis.

431. The organism causing osteomyelitis in sickle cell anemia -

a) Salmonella

b) Staphylococcus

c) H. influenza

d) E. coli

Correct Answer - A
Answer- A. Salmonella

- Most common cause of osteomyelitis in sickle cell anemia is salmonella.

432. In rheumatoid arthritis pathology starts in

a) Articular cartilage

b) Capsule

c) Synovium

d) Muscle

Correct Answer - C

Answer- C. Synovium

- RA is a chronic multisystem disorder that may affect many tissues and organs, but principally attacks the joint, producing a
- nonsuppurative proliferative and inflammatory synovitis that often progresses to destruction of the articular cartilage and ankylosis ofthe joint.

433. Bony clival erosion with inta-cranial calcification is seen in -

a) Craniopharyngioma

b) Medulloblastoma

c) Papilloma of the choroids plexus

d) Sella chordoma

Correct Answer - D

Answer- D. Sella chordoma

- Chordomas are rare, slow growing, locally aggressive neoplasms of bone that arise from embryonic remnants of the notochord.
- These tumors typically occur in the axial skeleton and are most common in the sphenooccipital region of the skull base and in the sacral regions.
- Craniocervical chordomas most often involve the dorsum sella, clivus, and nasopharyrrx.
- Chordoma of the clivus causes erosion of the clivus and attend in the direction of the nasopharynx as well as posteiorly.

434. Pressure difference of 5 mmHg between the two upper limbs occurs in which congenital heart disease?

a) TOF

b) TGA

c) HOCK

d) Supra-valvular aortic stenosis

Correct Answer - D

Answer- D. Supra-valvular aortic stenosis

- Blood pressure difference of 5 mm of Hg between two upper limbs can occur in congenital heart disease- Supra-valvular aortic stenosis

435. Epsilon wave is seen in

a) Brugada syndrome

b) Hypothermia

c) WPW syndrome

d) Arrhythmogenic right ventricular dysplasia

Correct Answer - D

Answer- D. Arrhythmogenic right ventricular dysplasia

- Arryhthmogenic right ventricular cardiomyopathy (ARVC), formerly called arryhthmogenic right ventricular dysplasia
- (ARVD) is an underr recognized clinical entity characterized by ventricuhr arryhthmias and a characteristic ventricular
- Pathology.

436. Wellen's syndrome suggests

a) Stable angina

b) Unstable angina

c) Prinzmetal angina

d) Ludwig angina

Correct Answer - B
Answer- B. Unstable angina
Wellen's syndrome sugests unstable angia.

- It is an E.C.G. manifestation of critical proximal left anterior descending coronary artery (LAD stenosis) in patients with unstable angina.

437. Which of the following ECG leads is most sensitive in detecting intraoperative myocardial ischemia

a) Lead I

b) Lead II

c) Lead V5

d) Lead V2

Correct Answer - C

Answer- C. Lead V5

- If only single lead can be displayed → V5
- If two leads can be displayed → V4 & V5

438. An 18-year-old male presented with acute onset a history of blurring of vision for the same duration on examination, the patient has quadriparesis with areflexia. Both the pupils are non-reactive.
The most probable diagnosis is -

a) Poliomyelitis

b) Botulism

c) Diphtheria

d) Porphyria

Correct Answer - B
Ans. b. Botulism

439. Dose of Reteplase for management of Acute MI is?

a) 5 IU

b) 10 IU

c) 15 IU

d) 50 IU

Correct Answer - B

Answer- B. 10 IU

- The recommended dose for Reteplase in Acute Myocardial infarction is l0 Unit bolus given over 2 minutes.
- It is recommended to repeat the second I0 unit dose after 30 minutes.

440. A patient with pheochromocytoma would secrete which of the following in a higher concentration?

a) Norepinephrine

b) Epinephrine

c) Dopamine

d) VMA

Correct Answer - A

Answer- A. Norepinephrine

- Most pheochromocytomas contain and secrete both Norepinephrine and epinephrine and the percentage of norepinephrine is usually greater than in normal adrenal

441. Dose of streptokinase to be used in MI is ?

a) 0.15 Million units

b) 1.5 Million units

c) 15 Million units

d) 150 Million units

Correct Answer - B

Answer- B. 1.5 Million units

- The adult dose of streptokinase for Acute Myocardial Infarction is 1.5 million U lV over 60 minutes.

442. Reverse split S2 is seen in -

a) Aortic stenosis

b) Aortic stenosis

c) Pulonary artery hypertension

d) Pulmonary stenosis

Correct Answer - A

Answer- A. Aortic stenosis

- Decreased impedance of the systemic vascular bed
- Prostenotic dilatation of the Aorta secondary to Aortic stenosis or regurgitation.
- Patent ductus arteriosus

443. Hypotension with muffled sound and congested neck veins is seen in?

a) Cardiac temponade

b) Paricardial effusion

c) constrictive pericarditis

d) Acute congestive heart failure

Correct Answer - A

Answer- A. Cardiac temponade

- Cardiac tamponade is characterized by accumulation of fluid in the pericardial sac due to various causes.
- The accumulation of pericardial fluid leads to eleyation of the peficardial pressure.
- The increased venous pressure may fill the heart and increase the intracavitory pressure to some extent but the transmural
- pressures i.e, the intracavitory pressure - pericardial prcssure are practically nro or even negative.

Beck's triad characteristically associated with cardiac tamponade-

- Increased venous pressure (neck vein distension)
- Decreased arterial pressure
- Muffle heart sounds, silent heart

444. Incorrect about Dresler syndrome is?

a) Post MI pericarditis

b) Post MI pleuritis

c) Autoimmune

d) Treatment with steroids is necessary

Correct Answer - D

Answer- D. Treatment with steroids is necessary

- Dressler's syndrome is due to autoimmunity. It is post MI carditis which may involve pleura.
- Often no treatment is necessary.
- Therapy with corticosteroids is required only in resistant cases.

445. A patient with CHF with LVEF <40% should be given?

a) ACEI + beta blocker

b) ACEI + furisemide

c) ACEI + CCB

d) ACEI + ARB

Correct Answer - A

Answer- A. ACEI + beta blocker

- Patient of heart failure with reduced resection fraction are treated by a combination of drugs.
- Drug combination- ACE inhibitors + beta blockers

446. Enteropathy type T cell lymphoma is associated with -

a) M.A.L. Toma

b) Celiac Sprue

c) Menetrier disease

d) Crohn's disease

Correct Answer - B
Answer- B. Celiac Sprue

- Enteropathy-type- T cell lymphoma is a rare complication of long-standing celiac disease.

447. Snover's triad in acute cellular rejection of liver transplantation includes all of the following except -

a) Portal inflammation

b) Endothelialitis

c) Cholangitis

d) Periportal fibrosis

Correct Answer - D
Answer- D. Periportal fibrosis
Snover's triad-
1. Mixed portal tract inflammation
2. Bile duct damage
3. Attachment of lymphocytes to endothelium

448. Which of the following is produced by Argentaffinoma of ileum?

a) G.A.B.A.

b) Serotonin

c) Epinephrine

d) Nor-epinephrine

Correct Answer - B

Answer- B. Serotonin

- Argentaffin cells of the carcinoid produce serotonin.
- The metabolites of serotonin are 5HIAA and are used in the diagnosis of carcinoid syndrome.

449. Bleeding crisis in acute idiopathic thrombo-cytopenic purpura is managed by all except -

a) RhIG

b) Prednisolone

c) Intravenous immunoglobulin

d) Eltrombopag

Correct Answer - D

Answer- D. Eltrombopag

- Minor purpura- Intravenous immunoglobulin (1g/kg x ld)
- Intravenous immunoglobulin
- Severe life threatening bleeding- lntravenous immunoglobulin, High dose of glucocorticoid

450. Positive dipstick for RBC with red color urine and red supernatant and clear sediment with positive dipstick -

a) Porphyria

b) Hematuria

c) Hemolysis

d) Rhabdomyolysis

Correct Answer - D

Answer- D. Rhabdomyolysis

- If a urine dipstick of the red supernatant is positive for heme, the patient has either hemoglobinuria or myoglobinuria.
- If a urine dipstick of the red supernatant is negative for heme, the patient may have one of a variety of unusual conditions

451. A 45 year old lady with normal PT and increased aPTT. About 2 year back, she was operated for cholecystectomy & did not have any bleeding episode.
What is next investigation for clinical diagnosis ?

a) Factor VIII assay

b) Dilute russel viper venom assay

c) Platelet aggregation test

d) Ristocetin cofactor assay

Correct Answer - B

Answer- B. Dilute russel viper venom assay

- Dilute Russel viper venom test is one of the test to detect lupus anticoagulant.
- Lupus anticoagulant is associated with prolongation in PTT and thrombosis (no bleeding)

452. In hemophilia B what is most common cause of death -

a) Hemorrhage

b) HIV, HBV, HCV due to transfusions

c) Transfusion reaction

d) Deep vein thrombosis

Correct Answer - A

Answer- A. Hemorrhage

- Most common cause of death in hemophilia b Hemonhage,
- Infectious complications arc also an important cause of death

453. Transformation of CLI/SLL into DLBCL is called -

a) Richter syndrome

b) Evans syndrome

c) Li Fraumeni syndrome

d) Kostmann syndrome

Correct Answer - A

Answer- A. Richter syndrome

- Richter's transformation is development of an aggressive large-cell lymphoma in the setting of underlying chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL).

454. Cowden syndrome is associated with -

a) Medulloblastoma

b) Astrocytoma

c) Dysplastic gangliocytoma

d) PNET

Correct Answer - C

Answer- C. Dysplastic gangliocytoma

- Cowden syndrome- Dysplastic gangliocytoma of the cerebellum (Lhermite- duclos disease)

455. . Most common cause of Carcinomatous meningitis -

a) Carcinoma breast

b) Carcinoma lung

c) Carcinoma gut

d) Malignant melanoma

Correct Answer - A

Answer- A. Carcinoma breast

- Carcinoma breast in the most common cause of carcinomatous meningites.

456. 32 years old AIDS positive female presented with headaches and nuchal stiffness. On lumbar pumbar examination clear CSF was obtained with leucocytes > 100/cu.mm. India ink staining was positive.
The most probable. The most probable diagnosis is -

a) Candida Meningitis

b) Tubercular Meningitis

c) Cryptosporidium

d) Cryptococcus meningitis

Correct Answer - D
Answer- D. Cryptococcus meningitis

- Features of meningitis in a patient with India ink staining positive is higltly suggestite of cryptococcal meningitis.

457. DOC for listeria meningitis -

a) Ampicillin

b) Cefotaxime

c) Cefotriaxone

d) Ciprofloxacin

Correct Answer - A
Answer- A. Ampicillin

- The antibiotic of choice for listeria infection is ampicillin or penicillin G.

458. A Patient presents with headache and Nuchal rigidity, Lumbar Puncture war performed and CSF Shows normal protein and normal glucose with clear CSF.
Microscopic examination of CSF showed 50 lymphocytes/cu mm with lymphocytic pleocytosis. What is the diagnosis?

a) Bacterial meningitis

b) Viral meningitis

c) Neoplastic meningitis

d) Fungal meningitis

Correct Answer - B
Answer- B. Viral meningitis

- Increased lymphocytes monocytes present.

459. All of the following criteria are required for diagnosis of obesity hypoventilation syndrome except -

a) Hypertension

b) Sleep disorder breathing

c) BMI 30 kg/m2

d) PaCO2. 45 mmHg

Correct Answer - A

Answer- A. Hypertension

- OHS is defined as daytime hypercapnia and hypoxemia in an obese patient with sleep-disordered breathing in the absence of any other cause of hypoventilation

460. All are false statement about pyridoxine except -

a) Deficiency can cause hemolytic anemia

b) Deficiency can cause hypochromic anemia

c) RDA for pyridoxine 5 mg

d) Can cause burning foot syndrome

Correct Answer - B

Answer- B. Deficiency can cause hypochromic anemia

- Vitamtin B deficiency cause hypochromic mictocytic anemia since its derivative pyridoxal phosphate (PLP) b a cofactor for the enzyme aminolevullanate synthase which is the first enzyme involved in heme biosynthesis.

461. alder-Reilley bodies are seen in -

a) Mucopolysacharidosis

b) Langerhans Histiocytosis

c) Alport's syndrome

d) Chediak-Higashi syndrome

Correct Answer - A

Answer- A. Mucopolysacharidosis

- Alder Reilly granules are larger than normal azurophilic and basophilic granules (Alder-Reilley bodies) in the cytooplasm of granulocytes, monocytes and lymphocytes seen in patients with mucopolysaccharodosis, mucopolysulfatidosis and lipofuscinosis.

462. Not seen with vitamin C toxicity -

a) Abdominal pain

b) Kidney stones

c) Hemolysis

d) Thrombosis

Correct Answer - D
Answer- D. Thrombosis
Abdominal pain, diarrhoea, nausea

- Increased prevalence of kidney stones (oxalate stones)
- Iron overload (in patients on supplemental iron)
- Hemolysis (Glucose 6 phosphate dehydrogenase deficiency)

463. Vitamin E deficiency presents with all except -

a) Ataxic gait

b) Peripheral neuropathy

c) Opthalmoplegia

d) Peri-follicular rash

Correct Answer - D

Answer- D. Peri-follicular rash

- Areflexia
- Progression to an ataxic gait
- Decreased vibration and position sensations
- Ophthalmoplegia
- Skeletal myopathy
- Pigmented retinopathy

464. Unipolar flagellate organism that causes pneumonia -

a) Pseudomonas

b) Mycoplasma

c) Aeromonas

d) Klebsiella pneumonia

Correct Answer - A

Answer- A. Pseudomonas

- Pseudomonas aeruginosa is a Gram-negative, aerobic rod shaped and polar-flagella bacterium with unipolar motility.

465. Which of the following is not seen tubercular meinigitis -

a) Evidence of old pulmonary lesions or a miliary pattern is found on chest rediography.

b) Culture of CSF is diagnostic in majority if cases and remains the gold standard.

c) It is most often in young children but also develops in adults.

d) Cerebrospinal fluid reveals a low leukocyte count.

Correct Answer - D

Answer- D. Cerebrospinal fluid reveals a low leukocyte count.

CSF shows increased leukocytes (especially lymphocytes) in TB meningitis.

- Tubercular meningitis is seen most often in young children but also develops in adults, especially those infected with HIV
- Tubercular meningitis results from the hematogenous spread of primary or post primary pulmonary TB.
- Culture of CSF is diagnostic inup to 80% ofcases and remainsthe gold standard

466. Photosensitivity is seen with deficiency of which vitamin -

a) Niacin

b) Pyridoxine

c) Folic acid

d) Vitamin D

Correct Answer - A
Answer- A. Niacin
Loss ofappetite

- Generalized weakness and irritability
- Abdominal pain, and vomiting
- Bright red glossitis
- Characteristic skin rash that is pigmented and scaling, particularly in skin areas exposed to sunlight Photosensitivity.
- Vaginitis and esophagitis also may occur.

467. Triad of Balint's syndrome includes all of the following, except -

a) Opsoclonus

b) Optic ataxia

c) Simultagnosia

d) Ocular apraxia

Correct Answer - A

Answer- A. Opsoclonus

- Balint's syndrome is the classical human dorsal pathway syndrome.
- Triad of Balint's syndrome includa simultagnosia, optic ataxia and aptaxia of gae (ocular apraxia).

468. Which of the following is used in management of diabetes?

a) Bromocriptine

b) Octreotide

c) Prednisolone

d) Pegvisomant

Correct Answer - A

Answer- A. Bromocriptine

- Bromocriptine is recently included as antidiabetic.

469. Dilutional hyponatremia is seen in ?

a) Addison's disease

b) Vincristine

c) Diuretic therapy

d) Craniphyrangioma

Correct Answer - B
Answer- B. Vincristine

- Acute kidney injury (AKI) (ARF)
- Cirrhosis
- Nephrotic syndrome
- Cardiac failure
- Anti cancer drugs

470. Hypokalemia causes death due to -

a) Respiratory insufficiency

b) Torsades de pointes

c) Systolic arrest

d) Diastolic arrest

Correct Answer - A:B
Answer- A & B Respiratory insufficiency and Torsades de pointes
Death in hypokalemia may be due to -
1. Respiratory failure due to respiratory muscle weakness
2. Cardiac arrhythmia, especially torsades-de-pointes/QT prolongation

471. Appearance of spleen with deposits of Amyloid within the white pulp of spleen is known as -

a) Sago spleen

b) Lardaceous spleen

c) Nutmeg spleen

d) Zahn spleen

Correct Answer - A

Answer- A. Sago spleen

- Altpeorance of Spleen with deposits of Amyloid in the stroma of the red pulp is known as lardaceous spleen and within the stroma of the white pulp is known as sago spleen.
- Cut surface looka like it is impregnated with grains of sand (nodules resembling tapioca like granules) i.e., sago grains and hence called Sago spleen.

472. CLO test is used for -

a) H. pylori

b) Brucella

c) Gonorrhoea

d) EBOLA

Correct Answer - A
Answer- A. H. pylori

- Rapid urease test, also known as the CLO test (Campylobacter-like organism test), is a rapid diagnostic test for diagnosis of Helicobacter pylori.

473. All can be manifestation of polycystic kidney except

a) Urine retention

b) Renal hypertension

c) Renal failure

d) Haematuria

Correct Answer - A
Answer- A. Urine retention
Chronic flank pain

- Gross and microscopic hematuria is common.
- Nephrolithiasis
- Hypertension
- Progressive decline in renal function.

474. Inclusion bodies seen in progressive myoclonic epilepsy -

a) Buschino bodies

b) Lewy bodies

c) Hirano bodies

d) Lafora bodies

Correct Answer - D
Answer- D. Lafora bodies

- Lafora bodies- progressive myoclonic epilepsy
- Hirano bodies- Alzheimer disease
- Buschino bodies- lateral sclerosis
- Lewy bodies- Parkinson's disease and Lewy body disease

475. Dent's disease is characterized by all except

a) Chloride channel defect

b) Males are affected

c) Nephrolithiasis

d) Defect in limb of Loop of Henle

Correct Answer - D

Answer- D. Defect in limb of Loop of Henle

- Dent's disease refers to heterogenous group of X-linked disorders.
- It b characterized by manifestations of proximal tubule dysfunction (PT) dysfunction associated with hypercalciuria nephrolithiasis, nephrocalcinosis and progressive renalfailure
- These features are found in males only.
- mutation in gene encoding CLS-S, a Voltage gated Chloide channel.

476. All are true about Hashimoto encephalopathy except -

a) Myoclonus

b) Seizures

c) Steroid responsive encephalopathy

d) EEG is normal

Correct Answer - D
Answer- D. EEG is normal
Electroencephalography

- Nonspecific electroencephalographic (EEG) abnormalities are seen in 90 to 98 percent of patients, usually demonstrating nonspecific slowing of background activity.
- Hashimoto's encephalopathy is treated with steroids

477. Breath sounds are decreased in following except

a) Lobar pneumonia

b) Pneumothorax

c) Pleural effusion

d) Atelectasis

Correct Answer - A
Answer- A. Lobar pneumonia

478. DOC for Hashimoto encephalopathy -

a) Steroids

b) Prophythiouracil

c) I-131

d) Liothyronine infusion

Correct Answer - A
Answer- A. Steroids

- Hashimoto encephalopathy (HE) is usually treated with corticosteroids and treatment of a dysthyroid state.

479. Residual volume is best measured by ?

a) Body plethysmography

b) Helium dilution method

c) Spirometry

d) All of above

Correct Answer - A

Answer- A. Body plethysmography

- pulmonary plekysmographs are commonly used to measure the functional residual capacity (FRC) of the lungs → the volume
- in the lungs when the muscles of respiration are relaxed → and total long capacity

480. Chances of blindness in diabetic patient as compared to non-diabetic patient is ?

a) 5 times

b) 10 times

c) 15 times

d) 25 times

Correct Answer - D

Answer- D. 25 times

- The gravity of this problem is highlighted by the finding that individual with DM are 25 times more likely to become legally blind than individuals without DM.

481. Screening test for sclerodema

a) Anti-nuclear antibody

b) Ul-Ribonucleoprotein antibody

c) Anti- L.K.M. antibody

d) Anti- topoisomerase antibody

Correct Answer - A

Answer- A. Anti-nuclear antibody

- ANA is the screening method of choice for systemic rheumatic disease such as systemic lupus erythyematous (SLE), mixed connective tissue disease, Sjogren syndrome, scleroderma, CREST syndrome, rheumatoid arthritis, polymyositis, dermatomyositis.

482. All are true for transplanted kidney except

a) Humoral antibody responsible for rejection

b) CMI is responsible for rejection

c) Previous blood transfusion

d) HLA identity similarity seen in 1:100 people

Correct Answer - D

Answer- D. HLA identity similarity seen in 1:100 people

- Within any particular family, sibling's have a 7:4 chance of being HLA identical. In contrast among unrelated
- people, the probabilities of HLA identity in several thousand depending upon phenotype involved' It is due to the fact that
- HLA complex is inherited intact as two haplotypes.

483. Which one of the following laboratory test differentiates leukamoid reaction from chronic myeloid leukemia?

a) LAP (leukocyte alkaline phosphatase)

b) LCA (leukocyte common antigen)

c) MPO (myelo-peroxidase)

d) TRP A (tartrate resistant alkaline phosphatase)

Correct Answer - A

Answer- A. LAP (leukocyte alkaline phosphatase)

- A leukemoid reaction is an exuberant form of leucocytosis with leucocyte count upto 5000/mm3, that may follow infections.

484. Most serious side effect with sodium polystyrene sulfonate -

a) Intestinal necrosis

b) Rebound hyperkalemia

c) Cardiac arrest

d) Respiratory arrest

Correct Answer - A

Answer- A. Intestinal necrosis

- Sodium polystyrene sulfunate (SPS) exchange Na+ for K+ in the gastrointestinal tract and increases the fecal excretion of K+.

485. The Maximum concentration of potassium delivered via central vein is?

a) 20 mmol/L

b) 40 mmol/L

c) 60 mmol/L

d) 100 mmol/L

Correct Answer - C

Answer- C. 60 mmol/L

- Maximum concentration possible delivered via central vein = 60 mmo/l

486. The most common inherited from of aplastic anaemia

a) Fanconi anaemia

b) Schwachman-Diamond syndrome

c) Diamond-Blackfan anaemia

d) Dyskeratosis Congenita

Correct Answer - A

Answer- A. Fanconi anaemia

- Most common inherited congenital anemia is Fanconis anemia.

487. Best management after human bite -

a) Ampicillin plus sulbactam

b) Clindamycin plus TMP-SMX

c) Fibroquinolone

d) Doxycycline

Correct Answer - A
Answer- A. Ampicillin plus sulbactam
1. Ampicillin/sulbactam
2. Imipenem
3. Cefoxitin in penicillin allergics

488. Which of the following is an immune response cause of anaemia

a) Diamond black fan anaemia

b) Hereditary spherocytosis

c) Glucose-6-phosphate dehydrogenase deficiency

d) Haemolytic disease of the newborn

Correct Answer - D

Answer- D. Haemolytic disease of the newborn

- Hemolytic disease of newborn is an immune mediated cause of anemia group antigens on fetal red blood cells resulting from maternal antibodies against blood.

489. Common neurological manifestations of thyrotoxicosis include all except -

a) Hyper reflexia

b) Muscle wasting

c) Chorea

d) Proximal myopathy without fasciculations

Correct Answer - C
Answer- C. Chorea
Hyperreflexia
- Muscle weakness
Muscle wasting proximal myopathy without fasciculation
- Chorea is rare

490. Anaemia due to antibodies against blood group antigens

a) Hereditary spherocytosis

b) G6PD deficiency

c) Haemolytic disease of the newborn

d) Alpha thalassemia major

Correct Answer - C

Answer- C. Haemolytic disease of the newborn

- Hemolytic disease of thefetus and newborn (HDFN), also known as alloimmune HDFN or erythroblastosis fetalis, is caused by the destruction of reil blood cells (RBCs) of the neonate or fetus by maternal IgG antibodies.

491. Decreased dietary intake of potassium is incriminated in leading to all except?

a) Hypertension

b) Stroke

c) CHF

d) Diabetes mellitus

Correct Answer - D

Answer- D. Diabetes mellitus

- Reduced dietary K+ are implicated in the pathophysiology and progression of hypertension, heartfailure, and stroke.

492. Hemoglobin Portland is best defined as

a) Alpha 2 : Delta 2

b) Alpha 2 : Epsilon 2

c) Zeta 2 : Gamma 2

d) Zeta 2 : Epsilon 2

Correct Answer - C
Answer- C. Zeta 2 : Gamma 2

- Hb Gower I → Zeta 2 / epsilon 2
- Hb Portland → Zeta 2 / gamma 2
- Hb Gower II → Alpha 2 / epsilon 2

493. A 33 year old woman has experienced episodes of fatigue, pleural effusion, pericardial effusion and carpal tunnel syndrome and macrocytic anemia. Best test for diagnosis shall be -

a) Anti-beta 2 phospholipid antibodies

b) Anti-smith antibody

c) Antinulear antibody

d) Assay for thyroid hormones

Correct Answer - D

ANSWER- D. Assay for thyroid hormones

- Carpel tunnel syndrome is a common complication of hypothyroidism and is often reversible with thyroid hormone therapy.
- Normally hypothyroidism is associated with normochromic anemia but may sometimes also cause macrocytic anemia.

494. Which of the following represent Fetal Haemoglobin (HBF)

a) Alpha 2 Beta2

b) Alpha 2 Gamma 2

c) Alpha 2 delta 2

d) Delta 4

Correct Answer - B
Answer- B. Alpha 2 Gamma 2

- Alpha 2 Gamma 2- < 2% of Total adult HB

495. HbH is characterized by

a) Deletion of three alpha genes

b) Deletion of three alpha and one beta gene

c) Deletion of two alpha and two beta genes

d) Deletion of four alpha genes

Correct Answer - A
Answer- A. Deletion of three alpha genes

- HbH disease- Deletion of three alpha genes (--/-alpha)- hemolytic anemia

496. All of the following statements about Fungal Endocarditis are true except

a) Candida is the most common agent

b) Life-long antifungal agents may be required

c) Surgical treatment is often recommended

d) Good prognosis with treatment

Correct Answer - D
Answer- D. Good prognosis with treatment
Most commonly associated with candida and Aspergillus.

- Most commonly associted with i.v. drug abuse and prosthetic valves and suppressed immunity.
- Antifungal agents do not cure fungal carditis.
- Both medical and surgical management required.

497. Which of the following metal ions is associated with secondary Parkinsonism -

a) Mangnese (Mn)

b) Magnesium (Mg)

c) Selenium (Se)

d) Molybdenum (Mo)

Correct Answer - A

Answer- A. Mangnese (Mn)

- Manganese ion exposure is implicated in free radical damage of the basal ganglia causing Parkinsonism.

498. Duroziez's sign is seen in

a) Aortic Regurgitation

b) Tricuspid RegurgitationMitral stenosis

c) Pericardial effusion

d) None

Correct Answer - A

Answer- A. Aortic Regurgitation

- Refers to systolic and distolic murmurs heard over the femoral artery while partially compresslng the vessel with the diaphragm of the stethoscope.

499. Wheel chair sign of Quinn is used as a typical red flag sign in -

a) Idiopathic parkinsonism

b) Duchenne muscular dystrophy

c) Becker's dystrophy

d) Thomson disease

Correct Answer - A

Answer- A. Idiopathic parkinsonism

- Wheelchair Sign is a Red Flag Sign described by Ouinn for the diagnosis of idiopathic Parkinsonism.
- The so called wheel chair sign of permanent dependency is more commonly associated with causes of parkinsonism other than Parkinson's disease

500. Which is not seen in Allgrove syndrome -

a) ACTH excess leading to Cushing syndrome

b) Achalasia

c) Alacrimia

d) Hyperpigmetation

Correct Answer - A

Answer- A. ACTH excess leading to Cushing syndrome

- ACTH resistant adrenal deficiency
- Achalasia of the cardia
- Alacrimia
- Autosomal recessive disorder
- Neurological features appear at later age and autonomic manifustations are the most common neurological disorder.
- Polyneuropathies, Amyotrophy and optic atrophy are other disorders
- Alacrimia is the earliest and most consistent symptom and the achalasia and adrenal insfficiency develop over the first two decades.

501. Blood pressure is difficult to measure in a patient with-

a) Mitral stenosis

b) Aortic stenosis

c) Complete heart block

d) Atrial fibrillation

Correct Answer - D
Answer- D. Atrial fibrillation

- Enlarged left ventricle
- Wide split 52
- Harsh Decresendo murmur
- Presense of S3
- Diastolic murmur
- Fourth heart sound

502. TTKG in hypokalemia is -

a) < 3-4

b) > 6-7

c) > 9-10

d) > 10-15

Correct Answer - A
Answer- A. < 3-4

- A normal TTK in normal subjects on normal diet is 8-9
- Without other disease, hypokalemia should produce a TTKG <3

503. Double density sign in Mitral stenosis is a sign of enlargement of

a) Right Atrium

b) Left Atrium

c) Left Auricle

d) Right Auricle

Correct Answer - B

Answer- B. Left Atrium

- Double density is seen on frontal chest radiograph in the presence of left atrial enlargement and occurs when the right side of the left atrium pushes behind the right cardiac shadows indenting the lung and forming its own district sihhouette.

504. Auto-splenectomy is associated with -

a) Systemic lupus erythematosus

b) Trauma

c) Sarcoidosis

d) ITP

Correct Answer - A

Answer- A. Systemic lupus erythematosus

- SLE patients with thrombocytosis anil antiphospholipid sytdrome are at risk of developing autosplenectomy.

505. Healing with calcification is a feature of -

a) Cryptococcosis

b) Mucomycosis

c) Aspergillosis

d) Histoplasmosis

Correct Answer - D

Answer- D. Histoplasmosis

- In the immunocompetent host, macrophages, lymphocytes, and epithelial cells eventually organize and form granulomas that contain the histoplasma organisms.

506. Dicrotic pulse is seen in ?

a) HOCM

b) DCM

c) RCM

d) Left ventricular failure

Correct Answer - B

Answer- B. DCM

- Dicrotic pulse is seen in dilated cardiomyopathy.
- Has two palpable waves are in systole and one in diastole.

507. The absolute indications for dialysis include the following except -

a) Persistent Hyperkalaemia

b) Congestive cardiac failure

c) Pulmonary edema

d) Hyperphosphatemia

Correct Answer - D

Answer- D. Hyperphosphatemia

- Pericarditis or pleuritis (urgent indication).
- Progressive uremic encephalopathy or neuropathy
- Persistent metabolic disturbances
- Fluid overload refractory to diuretics.
- Hypertension poorly responsive to antihypertensive medications.
- Persistent nausea and vomiting.

508. Sine wave pattern on ECG is done when serum potassium exceeds mEq/dl?

a) > 6 mEq/dl

b) > 7 mEq/dl

c) > 8 mEq/dl

d) > 10 mEq/dl

Correct Answer - C

Answer- C. > 8 mEq/dl

- Sine wave pattern- > 8 mEq/dl

509. The Epworth scale is used for assessing -

a) Body mass index

b) Vital capacity in post-operative patients

c) Sleep apnea

d) Risk of embolism in perioperative patient

Correct Answer - C
Answer- C. Sleep apnea
The Epworth Sleepiness Scale-

- Obstructive sleep apnea
- Narcolepsy
- Idiopathic hypersomnia

510. Loud P2 is found in ?

a) Pulmonary HTN

b) MS

c) MR

d) Aortic incompetence

Correct Answer - A
Answer- A. Pulmonary HTN

- Pulmonary hypertension unless proved otherwise.
- Eisenmenger's syndrome due to ASD, VSD, PDA.
- Multiple pulmonary thrombi

511. Neurodegeneration with iron accumulation in basal ganglia is typically seen in -

a) Hallervorden spatz disease

b) Hemochromatosis

c) Wilson's disease

d) Cystic fibrosis

Correct Answer - A

Answer- A. Hallervorden spatz disease

- Pantothenate kinase-associated neurodegeneration (PKAN), formerly known as Hallemorden-Spatz disease, is an autosomal recessive disorder; most cases are caused by mutations in the gene encoding pantothenate kinase 2 (PANK2).

512. In case of sudden death in a young football player, the first clinical suspicion would rest on which of the following differentials ?

a) Arrthymogenic right ventricular dysplasia

b) Takotsubo cardiomyopathy

c) Atrial septal defect

d) Eisenmenger complex

Correct Answer - A

Answer- A. Arrthymogenic right ventricular dysplasia

- The most important cause of sudden death in professional footballer in setting of beta myosin testing being available is not HOCM but arrythmogenic right ventricular dysplasia.
- The Desmin gene irresponsible for defect in muscle of right ventricle leading to fibrofatty replacement of the muscle.
- These patients in sitting of adrenergic stimulation can develop a VT or Torsades de Pointes leading to death on the football field.

513. PR interval is reduced in ?

a) Wenckebach phenomenon

b) WPW syndrome

c) Hypothyroidism

d) Complete heart block

Correct Answer - B

Answer- B. WPW syndrome

- In WpW, the bundle of Kent is an accessory pathway which allows fast conduction to the ventricles and consequently leads to complaints of palpitations and reduction of PR interval.

514. HLA-B* 1502 is a genetic marker for

a) Systemic lupus erythematosus

b) Polyarteritis nodosa

c) Steven Johnson syndrome

d) Seronegative spondy-arthritis syndrome

Correct Answer - C

Answer- C. Steven Johnson syndrome

- Inilitiiluals who haw HLA-B* 1502 are more likely to experience a severe disorder called Stevens-Johnson syrdrome in response to carbamazepine.

515. Recurrent aspiration pneumonia caused by

a) Dermatomyostis/polymyositis

b) Rheumatoid arthritis

c) Progressive systemic sclerosis

d) Systemic lupus erythrematosus

Correct Answer - C

Answer- C. Progressive systemic sclerosis

- Esophageal hypomotility and incompetence of the lower esophageal sphincter disease causes chronic gastroesophageal reflux and recurrent episodes of aspiration in systemic sclerosis.

516. Lucio phenomenon is treated with

a) Steroids

b) Lenalidomide

c) Clofazimine

d) Exchange transfusion

Correct Answer - D

Answer- D. Exchange transfusion

- Lucion phenomenon is a very rare comcomplication of leprosy.
- It presents as sudden necrotizing vasculopathy in Patients with longstanding, untreated lepromatous leprosy.

Treatment

- Optimal wound care and therapy for bacteremia are indicated. Ulcers tend to be chronic and heal poorly.
- In severe cases exchange transfusion is indicated.

517. Prolonged immobilization leads to?

a) Hypercalcemia

b) Hypocalcemia

c) Hyperkalemia

d) Hypokalemia

Correct Answer - A

Answer- A. Hypercalcemia

- Hypercalcemia of immobilization occurs predominantly in the young and in patients with other reasonsfor a high rate of bone turnow, such as Paget's disease or extensive fractures.
- Immobilization can lead to bone resorption suficient to cause hypercalcemia

518. Cardiac rhythm seen with hyperkalemia is all except?

a) Sinus arrest

b) Sinus bradycardia

c) Ventricular fibrillation

d) Torsades de pointes

Correct Answer - D
Answer- D. Torsades de pointes

519. All are true regarding ADH action except -

a) Postoperative secretion is more

b) ADH secretion occurs when plasma osmolality is low

c) Acts on DCT

d) Neuro-secretion

Correct Answer - B

Answer- B. ADH secretion occurs when plasma osmolality is low

- ADH acts on DCT and collecting duct to increase water reabsorption.
- ADH secretion is increased when plasma osmolality is high
- Stress (like surgery) increases ADH secretion.

520. The occurence of hyperthyroidism following administration of supplemental iodine to subjects in endemic area of iodine deficiency is due to ?

a) Wolf-Chaikoff effect

b) Jod-Basedow effect

c) Pemberton effect

d) Graves effect

Correct Answer - B

Answer- B. Jod-Basedow effect

- Synonymous with iodine induced hyperthyroidism and may occur in patients with multinodular goitre after intake of large amount of iodine.

521. A patient on amphotericin B has weakness and cramps. Serum potassium = 2.3 mEq/dl. Calculate the total parenteral potassium supplementation to be given to the patient over the next 24 hous?

a) 40 mEq

b) 80 mEq

c) 100 mEq

d) 140 mEq

Correct Answer - D

Answer- D. 140 mEq

- For causing a rise of potassium in blood by lmEq/dl, 200 mEq of potassium supplementation is required.
- Hence mathematically speaking this patient requires approximately 0.7 mEq/dl of potassium to rise in the blood leading to a requirement of 0.7 x 200 = 140 mEq over 24 hours

522. Hypokalemia is seen in all except?

a) Barter syndrome

b) Hypokalemic periodic paralysis

c) 21 hydroxylase deficiency

d) Reninoma (JG cell tumour)

Correct Answer - C

Answer- C. 21 hydroxylase deficiency

1. Increased entry into cells-

- An elevation in extracellular pH
- Increased availability of insulin
- Hypokalemic periodic paralysis
- Marked increase In blood cell production
- Hypothermia

2. Increased urinary losses

- Diuretics
- Primary mineralocorticoid excess
- Loss of gastric secretjons
- Non reabsorbable anions
- Renal tubular acidosis
- Hypomagnesemia
- Amphotericin B

523. Most common cause of death in diphtheria is due to

a) Airway compromise

b) Toxic cardiomyopathy

c) Sepsis

d) Descending polyneuropathy

Correct Answer - B
Answer- B. Toxic cardiomyopathy

- Most common cause of death in diphtheria cardiomyopathy

524. Aplastic anemia with skeletal abnormalities, short stature and pancreatic exocrine failure suggests a diagnosis of -

a) Fanconi anaemia

b) Diamond-Black fan anaemia

c) G6PD deficiency

d) Schwachman-Diamond syndrome

Correct Answer - D

Answer- D. Schwachman-Diamond syndrome

- Schwachman-Diamond syndrome is the second Most Common Cause of Pancreatic Exocrine Insuficiency afier Cystic Fibrosis.

Features of Schwachman- Diamond syndrome-

i) Pancrease

- Low serum trypsinogen
- Elevated feacal fat

ii) Hematological disorder-

- Neutropenia
- Anemia (aplastic)
- Pancytopenia (aplastic anemia)

iii) Skeletal abnormalities-

- Delayed bone age
- Progressive deformutics
- Pathological fractures
- Abnormal devlopement of growth plate

525. Faget sign is

a) Tachycardia with hypertension

b) Bradycardia with hyperthermia

c) Tachycardia with hyperthermia

d) Bradycardia with hypothermia

Correct Answer - B

Answer- B. Bradycardia with hyperthermia

The Faget sign (sphygmotheric dissociation) is the unsual pairing of fever and bradycardia.

Often seen in -

- Yellow fever
- Typhoid fever
- Tularaemia
- Brucellosis
- Colorado tick fever

526. All are useful in management of severe clostridium difficle-infection, except

a) Vancomycin oral

b) Neomycin enema

c) IV metronidazole

d) Tigecycline

Correct Answer - B

Answer- B. Neomycin enema

- Oral voncomycin plus intravenous metronidazole is the treatment of choice for patients with severe und complicated clostrdium dilificle infection (CDI)

527. A young female has the following lab values: Hemoglobin=9.8 gm%, MCV=70 serum iron=60, serum ferritin=-100, the diagnosis is

a) lhalassemia trait

b) Chronic iron deficiency anemia

c) Megaloblastic anemia

d) Anaemia of chronic infection

Correct Answer - D

Answer- D. Anaemia of chronic infection

- These features suggest anemia of chronic disease or infection.

528. What is true regarding byssinosis

a) Dyspnea resolves after cessation of exposure

b) Similar to chronic bronchitis and emphysema

c) Present as mediastinal fibro

d) Eosinophils are prominent in BAL

Correct Answer - A

Answer- A. Dyspnea resolves after cessation of exposure

- Symptoms of Byssinosis may improve on cessation of further exposure. Therefore symPtoms are worse at workPlace and improve away from workplace.
- Symptoms are similar to asthma (not emphysema or chronic bronchitis) --> Typical 'monday chest tightness'.
- Byssinosis does not usually cause mediastinal fibrosis'

529. Which is not a feature of cerebral malaria ?

a) Focal neurologic deficit

b) Retinal haemorrhages

c) Extensor plantar reflex

d) Absent abdominal relfex

Correct Answer - A

Answer- A. Focal neurologic deficit

- Focal reurological signs are unusual. Deep tendon reflexes are normal, increased or decreased.
- Corneal reflex is preserved, except in deep coma. Abdominal reflexes are invariably absent. Cremesteric reflex is often preserved.
- Extensor plantar response occurs in half of the patients.

530. All of the following are morphological neurological complication of measels except

a) Transverse myelitis

b) Encephalitis

c) Optic neuritis

d) SSPE

Correct Answer - C

Answer- C. Optic neuritis

Complications of measles are :-

- Respiratory: Otitis media (most common complication) , pneumonia (Giant cell or Hecht,s pneumonia), bronchitis, laryngitis, croup.
- CNS : These are most serious and include encephalitis, transverse myelitis and a rare complication SSPE (Subacute sclerosing
- panencephalitis).
- Gastrointestinal- Gastroentritis, hepatitis, appendicitis, diarrhea, ileocolitis, mesenteric adenitis.

531. The following is not true of platelet transfusion

a) Useful in ITP

b) Used in D.I.C.

c) Effective for 9-10 days

d) Effect decrease with repeated usage

Correct Answer - C

Answer- C. Effective for 9-10 days

- The shelf life of platelets stored at room temperatures is five days because of the bacterial infection risk that increases in relationship to the storage duration.
- Platelet transfusion is indicated in DIC and ITP.

532. Drug used in both type 1 and type 2 Diabetes mellitus is?

a) Metformin

b) Pramlintide

c) Coleselvam

d) Panconeline

Correct Answer - B

Answer- B. Pramlintide

- This is a synthetic amylin analogue (Amylin is a polypeptide produced by pancreatic p-cells which reduces glucagon secretion from alpha-cells and delays gastric emptying).
- It is given by subcutaneous route and is used in both Type I and Type 2 DM.

533. Side effects of hyperbaric oxygen therapy are all except

a) Absorption atelectasis

b) Increased pulmonary compliance

c) Decreased vital capacity

d) Endothelial damage

Correct Answer - B

Answer- B. Increased pulmonary compliance

1. CNS toxicity (Bert effect) :- The acute oxygen toxicity has predominant CNS effect.
2. Pulmonary toxicity (Smith effect) :- The chrronic oxygen toxicity has predominant pulmonary effect.
3. Ocular effects :- Retrolental fibroplasia (Retinopathy of prematurity).

534. Flat T wave and prolonged QT interval on ECG as shown in picture is due to ?

a) Hyperkalemia

b) Hypokalemia

c) Hypercalcemia

d) Hypocalcaemia

Correct Answer - D

Answer- D. Hypocalcaemia

- Main ECG change is prolonged QT inrerval mainly due to prolonged ST narrow QRS complex reduced PR interval
- T wave flattening and inversion prominent U-wave

535. Which HIV subtype is most common in India ?

a) A

b) B

c) C

d) M

Correct Answer - C

Answer- C. C

- There are two types of HIV virus infecting man HIV-1 (most common) and HIV-2.
- There are three groups of HIV -l, group-Dl (most common), group-O and group-N.
- 'M-group' HIV-I is further subdivided into nine subtypes.
- Subtype-C is the predominant one in India

536. What is the Median survival time in cardiac amyloidosis?

a) 1-3 months

b) 3-6 months

c) 6-12 months

d) 12-18 months

Correct Answer - C

Answer- C. 6-12 months

- Once heart failure develops, the median sumival is 6- 12 months in primary amyloidosis.

537. Upper lobe bronchiectasis is seen in which disease?

a) Cystic fibrosis

b) Aspergilloma

c) HIV

d) Bronchogenic carcinoma

Correct Answer - A

Answer- A. Cystic fibrosis

- Upper lobe bronchiectasis-
- Cystic fibrosis
- Tuberculosis
- Non tuberculous mycobacterial infections

538. Multi organ failure is defined as failure of minimum how many organs ?

a) 2

b) 3

c) 4

d) 5

Correct Answer - A

Answer- A. 2

- Multi organ failure (MOF) or multi organ failure syndrome (MOFS) or multi organ dysfunction syndrome (MODS) is defined as progressive dysfunction of two or more major organ systems in a critically ill patient that makes it impossible to maintain homeostasis without medical intervention and that is typically a complication of sepsis and is a major factor in predicting mortality.

539. Neuromuscular disorder is related to which type of lung cancer ?

a) Adeno carcinoma

b) Squamous cell carcinoma

c) Small cell carcinoma

d) Bronchoavelolar carcinoma

Correct Answer - B

Answer- B. Squamous cell carcinoma

- Myasthenia- Bronchogenic Ca
- Cerebellar degneration- Small cell Ca of lung
- Lambert- Eaton Syndrome- Small cell Ca of lung
- Peripheral neuropathy- Small cell Ca of lung
- Dermatomyositis/ Polymyositis- Small cell Ca of lung
- Stiffman Syndrome- GIT cancers, Breast cancer, Ovarian cancer

540. A patient presents with Hb of 8 gm%, WBC count of 2000/mm3 and platlet count of 60000/mm3. What is your likely diagnosis ?

a) Thalassemia

b) Sickle cell anemia

c) Aplastic anemia

d) Anemia of chronic disease

Correct Answer - C

Answer- C. Aplastic anemia

- The patient in question is having Pancytopenia (anemia, leukopenia and thrombocytopenia) → Feature of Aplastic anemia.

541. Pulseless electric activity due to ?

a) Ionic abnormality

b) Alkalosis

c) Hyponatremia

d) All of the above

Correct Answer - A

Answer- A. Ionic abnormality

- Pulseless electrical activity or PEA (also known as by the older term electromechanical association) refers to a clinical diagnosis of cardiac arrest in which heart rhythm is observed on the electrocardiogram that should be producing a pulse but is not.

542. On medical check up of a Punjabi student following findings were seen Hb of 9.9gm/d1, RBC count of 5.1 million, MCV of 62.5 fl and RDW of 13.51%. What is the most probable diagnosis ?

a) HbD

b) Thalassemia trait

c) Iron deficiency anemia

d) Anemia of chronic disease

Correct Answer - B
Answer- B. Thalassemia trait
Normal RDW with low MCV is seen in--
1. Anemia of chronic disease
2. Heterozygous thalassemia (Thalassemia trait)
3. Hemoglobin E trait.

543. Triple H therapy for subarachnoid hemorrhage consists of all except -

a) Hypothermia

b) Hypertension

c) hemodilution

d) HyPervolemia

Correct Answer - A
Answer- A. Hypothermia
The three'Es used In the treatment are : -

- Hnertension
- Hypemolemia
- Hemodilution

544. CO_2 level in kPa above which brain stem death is confirmed ?

a) 1

b) 9

c) 5

d) 6.5

Correct Answer - D

Answer- D. 6.5

- At the end of a period of observation, typically several minutes, arterial Pco2 should be at least > 6.6-8.0 kPa (50-60 mmHg) for the test to be valid.
- Apnea is confirmed if no respiratory effort has been observed in the presence of a sufficiently elevated Pco2.

545. Vaccine against capsulated organism given how many weeks before splenectomy ?

a) 1 week

b) 2 week

c) 4 week

d) 6 week

Correct Answer - B

Answer- B. 2 week

- Pneumococcal polysaccharide (PPSV) vaccination; If elective splenectomy is planned, vaccinate at least 2 weeks before surgery.

546.

Which part of the brain is most affected in deep coma ?

a) Brain stem

b) Locus ceruleus

c) Frontal lobe

d) RAS

Correct Answer - D

Answer- D. RAS

- The proximity of the RAS to midbrain structures that control pupillary function and eye movements permits clinical localisation of the cause of coma in many cases.
- preservation of pupillary light reactivity and of eye movements absolves the upper brainstem and indicates that widespread structural lesions or metabolic suppression of the cerebral hemispheres is responsible for coma.

547. Pulsus parvus et tardus is seen in ?

a) Severe AS

b) Severe MS

c) Severe AR

d) Severe MR

Correct Answer - A

Answer- A. Severe AS

- Pulsus tardus or pulsus parvus-et-tardus is a slow rising pulse with delayed systolic peak. It is seen in severe AS.

548. All are treatable diseases of spinal cord EXCEPT ?

a) ALS

b) Multiple sclerosis

c) Syringomyelia

d) A-V malformation

Correct Answer - A

Answer- A. ALS

1. Inflammatory : Multiple sclerosis, Neuromyelitis optica, transverse myelitis, sarcoidosis, SLE, vasculitis
2. Developmental : Syringomyelia, meningomyelocele, tethered cord.
3. Metabolic: Vitamin B12 deficiency (subacute combined degeneration), copper deficiency.
4. Infections: CMV HSV, HTLV-I, HIV

549. Anti-GD1 antibodies are seen in which variant of GBS ?

a) AIDP

b) AMAN

c) AMSAN

d) MFS

Correct Answer - B

Answer- B. AMAN

- Acute motor axonal neuropathy (AMAN) → Anti-GD1a antibodies.