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Rapid Review

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# Anatomy

1. Cranial duramater has periosteal and meningeal layers, is supplied by 5<sup>th</sup> nerve, is outermost meningeal layer and Dural venous sinuses are not present inner to the meningeal layer.
2. Lateral pterygoid muscle, medial pterygoid muscle and tensor veli palatini muscle are innervated by trigeminal nerve. Stylohyoid muscle is innervated by the stylohyoid branch of the facial nerve.
3. Absence of Right colic artery is the most common variation in its anatomy.
4. Skeletal muscle, smooth muscle and extra ocular muscles are derived from mesoderm and papillary muscles are derived from ectoderm.
5. Superior rectus muscle is an extraocular muscle which is supplied by opposite side nucleus.
6. Human blood-testis barrier is a tight junction between cells.
7. Anterior spinal artery, posterior spinal artery and posterior inferior cerebellar artery supplies medulla oblongata but superior cerebellar artery does not.
8. Lacrimal gland, submandibular gland and nasal glands are supplied by secretomotor fibres of facial nerve but parotid gland is not.
9. Content of cavernous sinus includes internal carotid artery.
10. Hair follicle, sebaceous gland and mammary glands are derived from ectoderm and Erector pili muscles are derived from lateral plate mesoderm.
11. Buccopharyngeal membrane consists of Endoderm and ectoderm.
12. Venous drainage of oesophagus consists of azygos vein, inferior thyroid vein and left gastric vein.
13. Contents of mesorectum includes superior rectal vein, pararectal nodes and inferior mesenteric plexus but not inferior rectal vein.
14. In cornea there are parallel and uniform spaced collagen is present.

# Physiology

1. For example, Blood is flowing through a circuit with an inflow pressure of 100 mmHg and an outflow pressure of 10 mmHg. Each of the parallel circuits (R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub>) has a resistance of 5 mm Hg/mL/min. Then blood flow across this circuit would be 90 ml/min.
2. Nuclear bag fibre senses dynamic length of muscle.
3. In a motor unit, Fast fatigue units are recruited last for the most demanding tasks.
4. 2, 3 DPG binds to 1 site of Hb and it increases release of O<sub>2</sub>.
5. Surfactants are secreted by Type 2 pneumocytes.
6. Hypoxia due to slowing of circulations is seen in stagnant anaemia.

7. In hypothermia there is shift of O<sub>2</sub>-Hb dissociation curve to left.
8. Receptor of joint capsule and ligaments is slow adapting.
9. Equilibrium pressure in the absence of flow pressure is called mean circulatory filling pressure.
10. Loss of stretch reflexes and loss of deep tendon reflex are not essential for brain death.
11. Most important hormone for gallbladder contraction to release bile is CCK.
12. During blood pressure measurement, the bladder of the blood pressure cuff should cover more than 80% of the arm circumference, blood pressure cuff should be at same level than the heart, patient should be in resting position and cuff should be tied over upper arm.
13. Neurons are most prone to ischemia.
14. After application of one stimulus, the time period in which the second stronger stimuli can form an impulse is called relative refractory period.
15. Blackouts usually indicates reversible brain damage and anterograde amnesia and it is also a sign of alcohol intoxication.
16. Serious complication of prolonged sitting posture is venous embolism.

## Biochemistry

1. About 1.5% of human DNA is coding or exon DNA, carrying information for protein products.
2. Methylation of cytosine is associated with decreased expression of gene.
3. Examples of uniparental disomy includes Russell Silver syndrome, Prader Willi syndrome and Angelman syndrome.
4. If a patient presents with severe energy deficiency, patient is deficient in Thiamine.
5. Succinyl-CoA, alpha ketoglutarate and citrate are intermediates of citric acid cycle.
6. Last electron acceptor in electron transport chain is O<sub>2</sub>.
7. Enzyme which is common for both glycogenolysis and gluconeogenesis is glucose-6-phosphate.
8. Barr body forms the basis for karyotyping studies in female.

## Pathology

1. Verocay body is seen in Schwannoma.
2. Cellular events of acute inflammation includes complement involved in chemotaxis, ICAM-adhesion of leukocytes and selectins margination.
3. A year old male presents with h/o bleeding. Peripheral smear shows leucocytosis, platelet count 50,000/mm<sup>3</sup>, increased neutrophils, normal lymphocyte, blast 20% and band form, myelocyte and metamyelocyte seen. T (8; 21) is positive. Diagnosis is AML.

4. Phagocytosis of *Mycobacterium tuberculosis* by macrophages is mainly mediated by IFN gamma.
5. The most important function of epithelial cells in tuberculosis is secretory function.
6. Rosettes are seen in retinoblastoma, medulloblastoma and PNET but not in neurocysticercosis.
7. Chalazion is a lipogranulomatous condition,
8. A 40 year old obese lady with RUQ pain and recurrent jaundice. In liver pathology there will be non-alcoholic steatohepatitis (NASH).

## Microbiology

1. HIV virus was discovered in 1983.
2. Methenamine silver is a special fungi stain which is green in color.
3. IgE causes anaphylaxis, immediate reaction and fixes complements but does not cross placenta.
4. Bacteria contains both DNA and RNA.

## Pharmacology

1. ATT which causes hypothyroidism is ethionamide.
2. Epinephrine is mixed alpha and beta agonist.
3. Lisinopril, enalapril and phenytoin produces active metabolites but valproate does not.
4. Clindamycin has time dependent killing and post antibiotic effect.
5. Anti-parkinson drug which may cause peripheral vasospasm is bromocriptine.
6. Ganja, charas and bhang are different forms of marijuana but afeem is not.
7. Alpha 2 agonists causes anxiolysis, sedation and analgesia.
8. Folic acid and Vitamin B1 are given to prevent side effects of pemetrexed.
9. Monoclonal antibodies, bleomycin, busulfan, fludarabine and vinca alkaloids are least emetogenic drugs.
10. HCG is used in male and female infertility and octreotide in diarrhea with VIPoma.
11. Abacavir, stavudine and lamivudine are NNRTIs.
12. Methadone causes Mu receptor, used in chronic pain and onset of action in oral route.
13. Chronic laxative use can lead to hypokalemia.

## Forensic Medicine & Toxicology

1. Burnt rope smell is due to poisoning of cannabis.

2. Perjury is punishable under section 193 IPC.
3. Nerine is active component of a white oleander.
4. Viper snake bite is a common snake bite in Indian physician treating such patients should be alert as the toxin is vasculotoxic.
5. A person who is intoxicated is not considered responsible for his actions under Sec 85 IPC.
6. Eonism is wearing a dress of the opposite sex.
7. Single most important indicator for Gustafson of age analysis is root transparency.

## Preventive and Social Medicine

1. MMR vaccine causes ITP as an adverse effect.
2. Malaria recrudescence is resistant to treatment.
3. Most common parameter used to detect endemic hypothyroidism is neonatal hypothyroidism.
4. A boy got unprovoked bite from a neighbour's dog. The animal control authority caught the dog and it was found healthy. Next step should be to start post exposure prophylaxis and watch the dog for 10 days.
5. In rubella isolation is done till 7 days after appearance of rash.
6. Human Poverty Index (HPI) includes adult literacy rate, % of population not having water source and % of child underweight for age.
7. If haemoglobin status of a population with mean value is 106 gm% with SD 2 gm%, then 5% population will be below 7.35 of Hb.
8. Common causes of epidemic after a disaster includes Leptospirosis, Rickettsia and Acute respiratory infections but excludes Leishmaniasis.
9. Rickettsiosis, equine encephalitis and rabies are included in Zoonoses.
10. Provisions included in the primary health care according to the Alma Ata declaration includes adequate supply of safe drinking water, provision of food supply and basic sanitation.
11. Components of kangaroo mother care includes skin to skin contact, early discharge and exclusive breast feeding but excludes free nutrition supplements.
12. Under HBNC registration of birth, recording of birth weight and motivating people for adherence to health system are remuneration of AHS but institutional delivery.
13. Measles does not require chemoprophylaxis.
14. Positive predictive value is a function of sensitivity, specificity and prevalence.
15. Calculation of infant mortality rate includes early neonatal deaths, late neonatal deaths and post neonatal deaths but does not include stillbirth.
16. In JSSK (Janani Shishu Suraksha Karyakram) there is free diet to mother during hospital stay, free delivery and free transport from home to hospital and back and does not include free treatment of sick infants up to 1 year.

17. Sentinel surveillance of HIV is done for disease trend, high risk group and population at risk and not to monitor effectiveness of control program.
18. Rural medical practitioner with a 3 year alternative to MBBS doctor was recommended by high level expert group committee.
19. If neonatal death is 450, stillbirth is 212, total live birth is 12450 then NMR is 36.
20. In NPCB, vision testing in schools is done by teachers.
21. OPV is interfered by maternal antibody, in India OPV is used mostly and cross infection through stool of vaccinated child produce herd immunity.
22. A rural girl has grey hair. 25 out of 40 classmates from the same village have also grey hair. But children from nearby village have normal hair. Her brother who is staying in aunt's house has also normal hair. Than the cause is environmental.

## Ophthalmology

1. A 28 week baby born to eclampsia mother with RDS, treated with surfactant and developed sepsis at 2 weeks. Suspected ROP screening is done at 4 weeks.
2. Soft exudates are seen in ganglion cell layer of retina.
3. A young male presents with central scotoma in left eye. His right vision showed 6/6 vision. On examination, in the left eye. There was focal foveal detachment in fundoscopy. Next step should be to inquire about use to steroids.
4. Microaneurysms are the earliest manifestations of diabetic retinopathy. Inner nuclear layer is involve in diabetic retinopathy.
5. Ex-press glaucoma implant is made of stainless steel.
6. A 45 year old man is diagnosed with diabetes at his present visit for the first time. He should visit an ophthalmologist immediately at time of diagnosis.
7. A 7 year old with let exotropia with right eye 6/6 with normal fundus. Left eye has only close hand movements with subretinal yellow exudates and retinal detachments and telangiectatic vessels. Diagnosis is Coats disease.
8. Pseudomonas infection is virulent and may cause corneal ulcer perforations within 48 hours.
9. A 50 year old man complains of problems in his near vision. His vision is 6/18 for both eyes which improves to 6/9 on adding +1 DS. Best immediate management for this patient is refraction correction with near add.
10. Critical angle of air corneal interface is 46 degrees.
11. In retinal sealing/ retinopexy, sulphur hexafluoride is used.
12. Fundus examination, laser inferometry and retinoscopy needs dilation of pupil and gonioscopy does not.
13. Glutathione prevents lens opacity by free radical scavenging.

14. If chuna powder goes into eyes, immediate treatment modalities includes washing with saline, slit lamp examinations and removal by double everting upper lid and removal of chuna particles.

## ENT

1. A young 16 year old boy with anemia (Hb - 6 mg %) presents with h/o frequent nasal bleed. Most probable diagnosis is Juvenile angiofibroma.
2. Bull neck is seen in corynebacterium diphtheriae infection.
3. Rinne's test was negative in right ear. Possible diagnosis is 40 db CHL right ear and left ear normal.
4. In stapedotomy, ante crura of stapes, post crura of stapes and stapedius tendon are removed but lenticular process of incus is not removed.
5. Ca larynx of stage T3No. Treatment is concurrent chemoradiation.
6. Wave V in BERA is seen in lateral lemniscus.
7. Skull base osteomyelitis causes pain on mastoid process, frequent oral toilet in it helps to reduce pain and surgery in skull base is a cause of it.
8. Receiver/ stimulator parts of cochlear implants are implanted during surgery.
9. Screening test of choice in neonates is OAE.
10. Pseudomembrane over tonsil and pharynx is caused by gram +ve bacilli.
11. A patients presented with antrochoanal polyp arising from the medial wall of the maxilla. Best management for this patient is FESS with polypectomy.

## General Medicine

1. David Lawrence Sackett is father of evidence based medicine.
2. C-ANCA is positive in Wegener's granulomatosis.
3. In cerebellar lesion. Tremor is intensional, it starts at the end of the movement and not at the start of the movement and also is of low frequency.
4. A lung biopsy of a HIV patient showed intra nuclear basophilic inclusion bodies with perinuclear halo. Patient's CD4 count was less than 100 at the time of diagnosis. Most probable cause is CMV.
5. Bradycardia and hypotension are seen in neurogenic shock.
6. In multiple myeloma there is increased IgG, ANA antibody and increased M spikes
7. Early diagnosis of acute hepatitis-B infection is made by presence of HBsAg in serum.
8. In a patient with gouty arthritis, synovial fluid aspiration will show needle shaped crystals.
9. In RDS, Type 2 pneumocytes are damaged.
10. Right atria chronic overload or acute overload is indicated by P wave more than 2.5 mm.
11. Hyperlipidemia, abdominal trauma and genetic defect in trypsinogen can cause pancreatitis and Islet cell hyperplasia cannot.

12. A patient has Focal hemorrhage in pons and in 4th ventricle. Clinical features would include contralateral loss of touch and pain and severe visual dysfunction.
13. Evidence of decreased risk of cardiovascular disease is associated with low to moderate daily alcohol consumption, regular physical activity and serum potassium.
14. V wave in left atrium is higher than in right atrium because left side is high pressure system.
15. 1st sign of spinal cord compression in TB spine in thoracic region is sensory loss.
16. A patient of RTA prolonged immobilisation in ITU. Patients developed sudden severe tricuspid regurgitation. Immediate management of this patient should be i.v. Heparin.
17. A chronic alcoholic patient is brought to the emergency department by family member. The person has not consumed alcohol since past days due to unavailability. The person complained of nausea, vomiting and dizziness. On the beginning of third day, he developed seizures (GTCS). Best medication to manage seizure in this patient is diazepam.

## General Surgery

1. Circumferential incision used in diaphragm surgery is safest.
2. A person with renal transplant developed infection of graft within 2 months. Most probable cause of infection is CMV.
3. Management of medulloblastoma in 1.5 year old child includes chemotherapy, total cranio-spinal irradiation and VP shunt for the obstructive hydrocephalus.
4. A patient presented with colon type diarrhea with blood. On sigmoidoscopy, cauliflower mass found and excised. On genetic analysis of mass, C myc, MSI (microsatellite instability) and erbB2 has prognostic significance. kras has prognostic value only in advanced colonic cancers.

## Pediatrics

1. C. parapsilosis is most common candida species infecting neonates from caregiver's hands.
2. A 3 days old baby is admitted with intraventricular hemorrhage. Baby develops abdominal distension. X-ray abdomen showed pneumatosis portalis. This is stage 2b of necrotizing enterocolitis.
3. A child present with albinism. He should be evaluated for ophthalmological conditions as regular ophthalmological follow-up is recommended for patients with albinism.
4. Olympian Brow and Rhagades are seen in Congenital syphilis.
5. A 4 year old girl presents with severe vomiting after viral fever of 6 days. She develops cerebral edema later on. Her liver biopsy finding would include marked microvesicular steatosis.
6. Mother on beta blocker, mother with diabetes mellitus and IUGR are risk factors for baby with hypoglycemia but postdated pregnancy is not.

7. A child presented with decreased S. Calcium, increased S. Phosphorus and decreased urinary calcium and phosphorus. These findings are seen in renal glomerular nephritis.
8. A urine sample of newborn with hepatosplenomegaly stained with giemsa stain which showed owl's eye appearance. Diagnosis is CMV.
9. A 3 year old child having protein 3+ in urine with oliguria with edema and no hematuria. Most probable diagnosis is minimal change GN.
10. A 4 year old child presented with fever for 6 days, generalized rash and cervical lymphadenopathy with strawberry tongue. Most probable diagnosis is scarlet fever.
11. Enzyme replacement therapy is most commonly used for Gaucher's disease.
12. A 3 months old child with history of complicated delivery presented with asymmetrical Moro's reflex. Most probable cause is Erb's palsy.
13. A child presented with lethargy, hypotonia after 12 hours of birth. Resuscitation is done and there are two episodes of seizures. Stage of HIE is 2B or 2C.
14. A child of 7 weeks age presented with cough, RR - 48/min and otherwise normal child. Then there is no role of antibiotics in this child, child does not need resuscitation and fever should be treated but this child does not have pneumonia.
15. A 32 week preterm infant, weighing 1400 gm, vitals are stable and is admitted in NICU. Best feeding procedure in this patient would be total enteral nutrition.
16. A child with 3 years of age presents with weakness with Hb level <5 gm/ 100 ml. History of joint swelling and bleeding spots were present. Causative organism would be hookworm.
17. Diagnosis from picture (picture of anencephalic baby was given).

## **Obstetrics and Gynaecology**

1. Advantages of hysteroscopic over open myomectomy include less pain, early ambulation and less bleed but does not include recurrence.
2. During pubertal growth in females includes pulsatile GnRH release during sleep.
3. Indication of Caesarean section in patients with previous CS includes breech presentation, fetal macrosomia and post-term pregnancy.
4. Antihypertensive indicated in pregnancy includes i.v. Sodium nitroprusside, i.v. labetalol and i.v. hydralazine. I.V. Diazoxide is contraindicated in pregnancy.
5. Criteria for diagnosis of superimposed preeclampsia in a pregnant lady with preexisting chronic hypertension includes increase in systolic BP by 30 mmHg and diastolic by 15 mmHg, platelets <70,000 and new onset proteinuria. Criteria does not include new vascular changes in retinal vessels.
6. Criteria for HELLP syndrome includes H (hemolytic anemia), EL (elevated liver enzymes) and LP (low platelet count).

# Radiology

1. Puff of smoke appearance in cerebral angiopathy is seen in Moyamoya disease.
2. A child shows upward gaze palsy and severe headache. CT suggests homogenous suprasellar mass in posterior 3rd ventricle and MRI suggests homogenous isointense T1 and isointense T2 with high contrast enhancements. Diagnosis includes Choroid plexus carcinoma.

# Anesthesia

1. Most appropriate mode of ventilation for a head injury patient is controlled mechanical ventilation (CMV).
2. Lithium should be stopped 1 day before surgery. (At Least 1 day before surgery and usually 1-2 days).
3. Size of laryngeal mask airway (LMA) for normal adults is 4.
4. Supra MAC anesthesia cause shift of EEG from theta to delta with increased slowing and finally a decreased in amplitude with burst suppression and ultimately an isoelectric EEG.
5. Most common ribs fractured during resuscitation are T4 to T6.
6. Ketamine, thiopental sodium and halothane affects CSF, absorption and it affects ICP. Nitrous oxide does not.
7. Stage of surgical anesthesia during ether administration is regular respiration to cessation of breathing.

# Orthopedics

1. Bankart lesion involves antero-inferior part of glenoid labrum.
2. Complications of supracondylar fracture of humerus in children includes compartment syndrome, myositis ossificans and mal-union but does not include non-union.
3. Young male having pain with daily morning stiffness of spine for 30 minutes and reduced chest movements. Most probable diagnosis is ankylosing spondylitis.
4. After knee replacement surgery proprioceptors of joints are damaged. Effect is normal movement.
5. Immediate treatment for patients with head injury with femur shaft fracture is intubation.

# Psychiatry

1. In Kluver-Bucy syndrome there is hypersexuality, hypermetamorphosis and placidity.
2. A 16 years old female has complains of recurrent abdominal pain but biochemical assays and ultrasound abdomen is normal. She suddenly complains of loss of vision of bilateral eyes. Ophthalmology finds nothing on examination. Symptoms in this patient are most probably due to malingering.
3. A child is not eating vegetables. His mother starts giving a chocolate each time he finishes vegetables in the diet. This method is known as operant conditioning.
4. Cognitive remediation is used for memory improvement.

# Dermatology

1. Noncicatricial alopecia can be present in alopecia areata.
2. Alopecia areata is associated with exclamation sign, atopy and pitting nails and not associated with geographical tongue.
3. A patient is suffering from painful vesicular eruption at T-4 dermatome. Most probable cause is herpes zoster.
4. A patient presented with oral mucosal lesions and flaccid blisters over skin. It detects fishnet pattern IgG in epidermis.
5. A young boy presented to OPD with multiple shiny pinhead size white papules over dorsum of hand, forearm and penis. Most probable diagnosis is lichen planus.
6. Flat topped violaceous papules, thinning of nail. Microscopic finding would be basal cell degeneration.
7. A child scratches his hand with a pen. A red wheal appears which persists for min. Most probable diagnosis is dermatographism.
8. A young person is having comedones and papulo-pustular acne over face, trunk and back. Management of this patients includes oral Doxycycline + topical retinoic acid.
9. A 7 year old boy presents with a right-sided vascular malformation and left sided focal seizures. The most likely diagnosis is Sturge-Weber disease.
10. A 30 years old male patient presented with mental retardation, seizure, facial angiofibromas and most likely ash-leaf macules. His 6 year old son also has same problem. Most probable diagnosis is autosomal dominant inheritance.
11. The most common association with coarse pitting of nails and onycholysis is well defined scaly plaques.