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*Q1:Write a note on pituitary gland, its hormones and abnormalities?*

*Ans: The pituitary gland also called master gland. It play a major role in regulating vital body function it is a "Master gland" because it control the activity of most other hormones secreting glands.*

*The pituuitary gland is a tiny organ, the size of a pea , found at the base of the brain.*

- ***Hormones Secreting by pituitary gland:***

*There are two types of hormones secretary glands.*

*1:Anterior pituitary gland*

*2:Posrerior pituitary gland*

- ***Anterior pituitary gland:***
  *These hormones are secreting by anterior pituitary gland that are*
  *1:Prolactine*
  *2:Thyrotropin hormones*
  *3:Luteinizing hormones*
  *4:Follicle stimulating hormones*
  *5:Growth hormones*
  *6:Adrenocorticotropin hormone*
- ***Prolactine***
  *It is anterior pituitary hormone. It main function is milk production after child birth.*
- ***Thyrotropin hormone***
  *Thyroid stimulating hormone also known as thytropin hormone is a pituitary hormone that stimulates the thyroid gland is produced thyroxine (T4) and triidothyronine (T3) which stimulate the metabolism*

*Of almost every tissue in the body it help to regulate long bone growth they act on nearly every cell in the body .*

- ***Luteinizing hormones***
  *These follicle stimulating hormones are considered a gonadotropic hormone because it role in controlling the function of ovaries in females and testes in males, which are known as gonads.*
- ***Adrenocorticotropin hormone***
- *These hormone act on adrenal gland and secretes adrenocortical hormones*
- *Mainly cortisol helps in stress condition.*
- ***Growth hormones***
  *Increase secretion at two glucose level.*
  *Growth hormones promote growth of almost all the body tissues.*
- ***Posterior pituitary.***
  *1:oxytocin*
  *2:Antidiuretic hormone*
- ***Oxytocin***
  *Uterine contraction and milk production*
- ***Antidiuretic hormone***
  *Water reabsorption from kidney tubules when bp increase more.*
- ***Abnormalities of pituitary gland***
- *Acromegaly*
- *Adrenal insufficiency (Addison's Disease)*
- *Craniopharyngioma*
- *Crushing's syndrome*
- *Empty sella Syndrome*
- *Familial isolated pituitary Adenoma.*
- *Fish and LH Tumors.*
- *GH Deficiency.*

*Q2:what is erythrocyte,erythropoiasis_ erythrocytosis and erythropenia?*

- ***Erythrocyte:***
  *Approximately 2.0 mill new eryth are produced in per second*
  *A red blood cell, which in human is typically a bioconcave disc without a nucleus. erythrocytes contain the pigment haemoglobin, which imparts*

*the red Colour to Blood ,And Transport Oxygen And Carbon dioxide to and from the tissue.*

*Approximately auater of the cell in the human body are red blood cells.*

- ***Erythropoiesis:***

  *It Is the process which produce red blood cell, which is development from erythropoietic stem*

  *Cell to mature red blood cell . it is stimulated by deceased O2 in circulating which is detected the (2) days, which then secret the hormone erythropoietic.*

- ***Erythrocytosis:***

  *It is a condition in which your body makes too money red blood cell (RBCS) or erythrocytes . RBCS carry oxygen to your organs and tissue. Having too many of These cell can make your blood thicker than normal and lead to blood clots and complication.*

- ***Erythropenia:***

  *If the erythrocyte count is*

  *Less them normal such state is called erythropenia*

  *Erythropenia may be because of problem in production .*

  *Excessive destruction*

  *(hemolysis)*

  *Blood loss.*

  *Q3:What is platelets and write about clotting mechanism and its all steps?*

  *Ans: platelets also called thrombocytes are component of blood whose function is to react to bleeding from blood vessels injury by clumping , thereby initiating a blood clot. If one of your blood vessels gets damaged it send information or signal to platelets . it come and make a clot to the injury and stop bleeding.*

- ***Life span***

  *10 days*

- ***Functions***

  *Stop bleeding*

  *Maintain hemostasis*

  *Clotting mechanism*

- ***Clotting Mechanism***
  *Four mechanism are involved in clotting mechanism*
- *Adhesion*
- *Activation*
- *And aggregation of platelets*
- *Deposition and maturation of fibrin*
- ***Adhesion***
  *1: Injury to the blood vessel*
  *2:Endothilium lining the vessels damaged.*
  *3: Blood comes into space under endothelium.*
  *4:platelets binds with surface receptors of collagen and adhere tightly.*
  *4:This is adhesion.*
- ***Activation***
  *1:Platelets change shape.*
  *2:Turn on receptors and secrete chemical messenger to activate and invite additional platelets.*
  *3:Activated platelets adhere tightly injury site.*
- ***Aggregation***
- *Platelets connect to each other through receptor bridge.*
- *Platelets plug formed at injury site unless the interruption is physically too large.*
- ***Fibrin deposition***
- *Formation of platelet plug will insure primary hemostasis.*
- *Now fibrin deposition start and thus started secondary hemostasis.*
- *Thus fibrin clot formed.*
- *Now clot retraction and platelet inhibition.*
  *Q4:write a detail note on ABO system?*
  *Ans:*
  ***ABO System:-***
- *A Blood type also called a blood type*
- *Classification of blood is based on the presence and absence of Antigenic substances on the surface of red blood cells.*
- *These antigens may be*
  *Proteins.*

*Carbohydrates, glycoproteins, or glycolipids, depending on the blood group system.*

- *The ABO blood group is the most important blood type or ( blood group system) in human blood transfusion .*
- *ABO blood types are also present ins some other animals*
  *For example rodents and apes such as chimpanzees,bonobs and gorillas.*

***History…..!!***

Karl Landsteiner discovered the ABO blood group system in 1901.

- Adriano sturli and Alfred Von Decastello
  Who were working under Landsteiner discovered trpe AB a year later ij 1902.
- Landsteiner was awarded the 1930 Nobel prize in physiology or medicine for his work.
- ***ABO Basics***
  *Based on the presence or absence of antigen A and antigen B ,blood is divided into four group:*
  *A, B, AB and 'O' group .*
  *Blood having antigen A belongs to 'A' group .This*
  *Blood has beta -antibody in the serum.*
  'O' group and both a and beta antibodies are present in the serum.
- ***Principal of blood grouping***
- *Blood grouping Is done on the basis of agglutination.*
- *Agglutination The Collection of Separate Particles like RBCs into clumps or masses.*
- *Agglutination occurs if an antigen is mixed with its Corresponding antibody which is called isoagglutinin, i.e occurs when A antigen is mixed with anti -A or when B antigen is mixed with anti – B*
- ***Importance of ABO groups In Transfusion***
  *During blood transfusion, only compatible blood must be used.*
  *The one who gives blood is called 'donor' and the one who receives the blood is called 'recipient'.*
  *While transfusing the blood antigen of the donor and the antibody of the recipient are considered .*

- ***Transfusion Reaction***
  ***Due to abo incompatibility:***
  *Transfusion reaction are the adverse reaction in the body, which occur due to transfusion error that involves transfusion of incompatible (mismatched) blood .*
  *The reaction may be mild causing only fever and hives (skin disorder characterized by itching)*
  *Or may be sever leading*
  *To renal failure ,shock and death.*

*Q5part(a): A person fell from . . . . . do as a first aid?*

*Ans: First we will to stop the head bleeding from sterile clean cloth.But do not apply pressure on the head injury. And then take it to the hospital.*

*Part(B)*

*You have to meet . . . . . measures will you take?*

*Ans: Maintain at least Six feet distance from the covid positive person. When your friend cough, sneezing or speak. They will spray small droplets. From their nose or mouth which may contain virus. You will protect your self from your friend droplet to wear gloves and mask. And also suggest to your friend to cover your self and isolate your self in close room .And if you are closed to your friend then you will be suffer from covid 19.*

***The END Thank U***