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Paper # WBC, Platelets disorder.

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Q1 Hodgkin's lymphoma:-

Ans: The word Hodgkin's lymphoma is also called Hodgkin's disease.

⇒ RS cell which are found in the disease tissue is called Hodgkin's disease which is a lymphoma.

⇒ So lymphoma is based on the presence of Reed-Sternberg cell in Hodgkin's lymphoma as histologically.

⇒ Ulcer is in a role pathogenic.

⇒ RS cells charactristics and abnormal mononuclear cells which are associated both are neoplastics.

P T-O

⇒ The disease of Hodgkin's lymphoma which can be present at any age but in children is rarely.

⇒ In young adults which having this in peak incidence.

⇒ The ratio of male predominance is 2:1.

So this is the clinical features condition.

⇒ Normochromic and normocytic anaemia are the most common hematological and biochemical finding of this.

Symptoms:-

↳ Cervical lymphadenopathy in patient.

↳ most of the painless patient present and also non-tender.

↳ assymetrical.

↳ Enlargement of lymph nodes of superficialy.

↳ Patient present of cervical nodes about 10-15% etc.

Q2 Hemostasis:-

Ans ⇒ The word hemostasis is derived from two words "Hemo" which means blood and "stasis" means stable

⇒ It is also called Blood loss prevention.

⇒ The condition in which the body stop the bleeding is called hemostasis.

OR

⇒ The procedure in which the body stop bleeding is called hemostasis.

⇒ By the physiological process in prevention of bleeding from damaged of injured vessel spontaneously.

P-T-O

Steps :-

There are three steps of hemostasis are as under.

(i) Vasoconstriction.

(ii) Hemostatic plug / platelet plug formation

(iii) Coagulation of blood.

1) Vasoconstriction:-

↳(i) Dilation

↳(ii) Constriction.

↳ These two are the mechanism of blood vessel.

↳ Platelets which prevent the blood loss as the platelets release some chemicals such as "Serotonin" which help in the decreasing of the size of vessel

of the blood.

So bleeding will also decreases.

⇒ An increasing of Ca ions concentration in smoot muscles is the also result of vasoConstriction.

(2) Platelet Plug formation :-

Here perform 2 function by platelets.

(i) Release other two chemicals such as (ADP adenosin diphosphate and thromboxane.

(ii) Fill the gap as injured areas.

⇒ Both the ADP and thromboxin which in the aggregation of platelets.

and so on

3) Coagulation of blood :-

⇒ Those process in which the blood clot is formed

is called Coagulation of blood.

⇒ They are the major function which is responsible for preventing and termination of bleeding or loss of blood.

⇒ In such function of blood clotting is called Coagulation of blood.

Clotting Factors:-

⇒ The system of coagulation which is consist of 13 clotting factors. are as under their names.

(i) Fibrinogen (ii) Prothrombin

(iii) Thromboplastin (tissue factor (iv) ~~Calcium~~ Calium

(v) Labile Factor (vi) Presence not proved.

(vii) Stable factor (viii) Antihemophilic

(ix) Christmas (x) Stuart power factor.

(x) Plasma thromboplastein or antecedent

(xii) Hageman (xiii) Fibrin Stablizing Factors.

Fibrinogen:

(i) Fibrin is a factor which is circulat in the blood of all vertebrates which is made in liver.

⇒ Enzymatically convert from thrombin to fibrin in which the fibrin based on blood clot.

(ii) Prothrombin:- Rose factor which help in clot appropriately which is made by liver.

(iii) Thromboplastin:- It is also the factor of blood clotting.

P - Pe

⇒ It is also a mixture of Phosphalipids and tissue factor which are found in plasma.

⇒ Coagulate the blood through the catalyzing the conversion of prothrombin to thrombin.

(iv) Calium :-

Rose factor which also help in blood clotting.

(v) Lebile factor :-

Rose factor which help in the system of coagulation.

⇒ Reg are the Protein.

⇒ Also called factor V.

(vi) Presence not proved :-

It is also a factor which will help in coagulation. P.T.O

(vii) Stable factor :-

⇒ Factor no. (vii)

⇒ Formed in Kidney and the influence of vitamin K.

⇒ Clotting factor.

⇒ Coagulation factor.

(viii) Anti Hemophilic :-

⇒ Clotting factor.

⇒ In blood occuring protein

⇒ Antihemophilic (viii)

⇒ They work temporarily.

⇒ They are the protein help in blood clotting.

(ix) Christmas :-

⇒ help in blood clot.

⇒ Factor on (ix) no

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(x) Stuart Power Factor:-

It is also called eponym Stuart-Power Factor.

⇒ They are synthesized in liver.

⇒ They are also the enzyme of the coagulation cascade.

(xi) Plasma thromboplastin:-

⇒ It is also a factor XI

⇒ It is the enzyme which also help in coagulation.

⇒ They are encoded by F11 gene.

(xii) Hageman:-

They are the coagulation factor XII

⇒ They are the plasma protein.

⇒ They are also encoded by F12 gene in human.

(xiii) Fibrin Stabilizing Factor :-

⇒ It is also help in coagulation.

⇒ They are XIII Factor.

⇒ They are also a zymogen, which are found in human blood some other in animals blood. and so on.

Q3:- Hemophilia :-

⇒ Both the hemophilia are same as pthologicall and clinically.

⇒ In the result of inherited deficiency the both are sex-linked recessive disorder in the deficient factor.

⇒ Factor VIII deficiency is the hemophilia-A.

⇒ with the reduction, It is the most

common hereditary x-linked recessive disease.

So 30% of hemophilacs have no family history in the amount of factor (VIII) activity.

⇒ Transmitted as Sex-linked recessive disease.

⇒ located on long arm of the X-chromosome.

⇒ Hemophillia not clinicall manifest due to normal copy of X-chromosome

⇒ Hemophilia transmission to children as the 25% of children may be normal male, 25% normal female, 25% female cattier and 25% may be hemophiliac male and so on.

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Types of Hemophilia :-

There are two most common types of hemophilia.

(i) Hemophilia A.

(ii) Hemophilia B.

(i) Hemophilia A :-

↳ It is the factor VIII deficiency.

↳ It is also called ~~christmas disease~~. factor VIII deficiency.

↳ They are the condition of inherited.

↳ By national institutes of health, they considered a rare disease.

etc.

P T O

(ii) Hemophilia B :-

↳ It is the factor of Hemophilic which is also called factor IX deficiency or chrismas disease.

↳ It is also the inherited condition

↳ which they considered rare disease by NIH.

and so on.

↳ It also having three catogaries (i) mild (ii) moderate (iii) severe.

Hemophilia symptoms :-

↳ Bleeding from injuries excessively.

↳ Deep or large bruises.

↳ Bleeding after vaccination unusually.

↳ Painfull joints.

↳ P-T-G

↳ Hematuria.

↳ Nosebleeds

↳ etc.

Lab diagnosis :-

↳ Screening test of hemophilia.

↳ CBC Test

↳ APTT test

↳ PT test

↳ Fibrinogen test

etc.

Q4:- Von Wille Brant disease:-

Ans:- ⇒ Described by a Finnish physician named Dr. Erik Von willebrand in 1926.

⇒ It is estimated which is to affect in one hundred individuals.

⇒ This disease which is composed of 2050 amino acid and Glycoprotein.

⇒ They effect both male and femal equally.

⇒ On this disease most of the researchers are agree as the disease is the most common genetic bleeding disorder.

P - T - G

⇒ This disease is and ~ pattern of autosomal dominant inheritence disease.

⇒ So vWD have to forms are as under.

1) Hereditary vWD: It also having Quantitative which is also having two types

(i) Type I

(ii) Type III

and Qualitative having

(i) Type II

(ii) Platelets type.

2) (i) Acquired vWD

(ii) Antibodies against vwf.

D-F-G

Hereditary VWD (quantitative hereditary VWD)

Type I:-

↳ Disease of mild moderate

↳ Cases 70%

↳ Asymptomatic.

↳ Circulation is clear quickly.

↳ Low secretion.

↳ Heterogenous

etc.

Type II:-

↳ Disease is severe

↳ Cases are 80%

↳ Homogenous

↳ Secretion is completly absence due to defective gene

etc.

Qualitative hereditary VWD

Type 2:
↳ VWF qualitative defiency
↳ Four subtypes.
↳ mild to moderate disease.
etc

Type 4 platelets
↳ Decrease in platelets.
↳ Affinity of platelets for vwf increase.
↳ Autosomal dominant
etc.

So Rey are also having sub-types are as under.

(i) Type 2A (ii) Type 2B
(iii) Type 2M (iv) Type 2N.

P-T-C

Clinal Features:-

↳ mild bleeding which are the most cases.

↳ More bleeding from wounds

↳ Hemophilia A is the severe case of it.

↳ Epistaxis.

etc.

Lab diagnosis:-

↳ CBC Test

↳ Normal Fibrinogen

↳ Normal Platelet Count

↳ Low in Hb

↳ Normal Hemoglobin

etc.

and so on.

Q5: Hemolytic Uremic Syndromes.

⇒ It is those condition in which there is a premature destruction of red blood cells.

⇒ When the process of hemolytic uremic syndrome begins then damaged red blood cells start to clog the filtering system in the kidneys.

⇒ They cause the disease as life threatning kidney failure which is associated with hemolytic syndrome.

⇒ After 2 to 14 days the hemolytic uremic syndrome cases which are mostly develop in children.

P.T.O

⇒ After an E.coli infection the hemolytic uremic syndrome is develop in an adult.

Symptoms :-

↳ Pale skin

↳ Hematuria

↳ Fatigue

↳ Face swelling

↳ Hands, feet or entire body swelling.

↳ vomiting and ~~body~~ bloody diarrhea.

etc.

Etiology :-

↳ Unpasteurized and raw milk

P-T-O

↳ Meat which is undercooked.

↳ Contaminated lakes and swimming pools

↳ Viral or bacterial infection which is the less common causes other than E.coli.

etc.

Lab diagnosis:-

↳ CBC Test

↳ TLC — increase 50000–60000/uL

↳ Hb ↓ decrease

↳ Platelet ↓ decrease

↳ Helmet cells in P-Smear.

Clinical Test:-

↳ chemical Test.
↳ increased in Uric acid.
↳ Bilirubin Elevated.

etc. P-T-O

Types of HUS :-

There are two types of hemolytic uremic syndrome.

(i) Typical HUS and

(ii) ATypical HUS.

(i) **Typical HUS:-**

↳ Shiga toxin infection which produce bacteria E.coli serotype O157:H7 which is the cause of it.

↳ D+HUS in which mostly with diarrhea often bloody diarrhea.

(ii) **A Typical HUS.**

↳ It is rare as (non-Stx-Hus).

↳ The disease which may occur

without diarrhea in year round.

↳ Stx infection producing the bacteria which is do not cause as the amplies of name.

↳ Genetic abnormalities is the association of familial form etc..

The End