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Q1: write a note one Hodgkin lymphoma ?

HODGKIN LYMPHOMA:

(HL) is a type of lymphoma in which cancer originates from a specific type of white blood cells called lymphocytes.

Hodgkin's disease is a lymphoma in which RS cells are found in the disease tissue.

About of half cases of Hodgkin lymphoma are due to Epstein- Barr virus (EBV) and these are the generally classic form. Genome has been detected in 50% or more of cases in Hodgkin tissue but it role in the pathogenesis is unclear.

Other risk factors include a family history of the condition and having HIV / AIDS.

Immunoglobulin gene rearrangement studies suggest the RS cell is of B- Lymphoid lineage and that it is often derived from a B cell with a crippled immunoglobulin gene caused by the acquisition of mutations that prevent synthesis of full- length immunoglobulin.

HISTOLOGICAL DIAGNOSIS:

The diagnosis is made by histological examination of an excised lymph node. The distinctive multinucleate RS cell is central to the diagnosis.

Diagrammatic representation of the different cell seen histologically Hodgkin lymphoma

Staging of Hodgkin lymphoma.

Stage 1) .

Indicates node involvement in one lymph node area.

Stage 2)

Indicates disease involving two or more lymph nodal areas confined to one side of the diaphragm.

Stage 3)

Indicates disease involving lymph nodes above and below diaphragm.

Stage 4) :

Indicates involvement outside the lymph node areas and refers to diffuse or disseminated disease in the bone marrow, liver and other extramural sites.

SYMPTOMS:

Fever

Night sweats

Unexplained weight loss

Severe itching

Painless swealling of lymph nodes in your neck, armpits or groin etc.

PROGNOSIS:

Approximate 5- years survival rates range from 50% over to 90% depending on age

Stage and histology.

Q2: what is Hemostasis , also explain steps and sorting factors ?

HOMEOSTASIS: Unplanned arrest or prevention of bleeding form injured / damage vessel by the physiological process.

Is a precisely orchestrated processing involve platelets, clothing factors, and endothelium that occurs at the site of vascular injury and culminated in the formation of a blood clot, which serve to prevent or limit the extend of bleeding .

Four major physiologic events participate in the hemostatic process;

Vascular constriction

Platelets plug formation

Fibrin formation

Fibrinolysis

STEPS OF HOMEOSTASIS:

VESOCONTRICTION:

Result in increased calcium ions in smooth muscles.

Circulating epinephrine and activate sympathetic nervous system.

Interact with cell surface

Increased intracellular calcium from sarcoplasmic reticulum

Activate myosin light chain kinase.

Stimulate cross bridge cycle.

HOMEOSTASIS PLUG:

Also known is homeostasis plug or platelet thrombus is an aggregation of platelets formed during the earlier stage of homeostasis in response to blood vessel injury.

COAGULATION OF BLOOD:

The process by which body stops bleeding.

In this process blood changes from liquid to gel.

13 clothing factors that help in different coagulation factors.

FACTORS :

1)Prothrombin

2)Thromboplastin

3)Labile facto

4)Calcium

5)Fibrinogen

6)Presence not proved

7)Christmas

8)Stable factor

9)Hagemen

10)Anthemophilic

11)Staurt power factor

12)fibrin stabilizing factor

13)plasma thromboplastin or antecedent

Q3: Explain Hemophilia it's types, symptoms, and lab diagnosis ?

HEMOPHILIA:

Hemophilia A and B are similar in both clinical and pathological features, the difference being

A medical condition in which ability of the blood to clot is severely reduced, in the deficient factor, both are six-linked recessive disorders resulting in inherited deficiency.

Causing the sufferer to bleed severely from even of slight injury. of the clotting factor or synthesis of a defective clotting factor. Males are affected are carriers.

TYPES:

The two most common types of hemophilia are factor VIII deficiency (Hemophilia A) and factor IX deficiency (Hemophilia B) or Christmas disease)

Hemophilia A and Hemophilia B are inherited conditions and considered rare diseases by the national institutes of health. A rare disease is one that affects fewer than 200,000 individuals in the United States. Both hemophilia A and B affect all races and ethnic groups equally.

Hemophilia A most common. It occurs in about one in 5,000 male births; annual about 400 babies are born with hemophilia A.

Hemophilia is the second most common type of hemophilia.

Hemophilia B occurs in about one in 25,000 male births and affects about 3,300 people in the United States.

According to US centers for disease control and prevention, the exact number of people living with hemophilia in the United States is not known, although researchers currently estimate it to be about 20,000.

Hemophilia A and B are the best known types of hemophilia, but other clotting factor deficiencies also exist.

Hemophilia C, also known as Rosenthal syndrome, is caused by low levels of factor (XI), another blood protein required to make a blood clot. Although associated with bleeding hemophilia C differs from hemophilia A and B in cause bleeding and tendency.

Symptoms:

Many large or deep bruises.

Unusual bleeding after vaccinations

Pain, swelling or tightness in your joints

Blood in your urine and stool

Nosebleeds without a known cause.

In infants, unexplained irritability

Unexplained and excessive bleeding from cuts or injuries, or after surgery or dental work

Lab diagnosis:

Hemophilia B (Christmas disease, factor IX deficiency)

Both factor VIII and IX together activate factor X in coagulation cascade.

Thus severe factor IX

Deficiency is clinically indistinguishable from hemophilia A. it is also inherited as an x-linked recessive trait and presents with variable clinical severity. Assay of factor IX should be done to

Diagnose Christmas disease (named after the first patient). Recombinant factor IX is used for treatment.

Q4: Describe Von Wille Brand disease ?

Von Willebrand disease:

Von Willebrand disease was first described in 1926 by a Finnish physician name Dr. Erik Von Willebrand

Von Willebrand disease is estimated to affect 1 in 100 individuals

Most researchers agree that Von Willebrand disease is the most common genetic bleeding disorder.

Von Willebrand disease (VWD) is a blood disorder in which the blood doesn't clot properly

Glycoprotein and composed of 2050 amino acid

Males and females are equally affected

Von Willebrand disease is a autosomal dominant inheritance disease pattern.

TYPES OF VWD:

TYPE 1)

This the most common and mildest form of VWD in which a person has lower than normal levels of VWF. When a person with type 1 VWD also might have low levels of factor VIII another type of blood clotting protein .

70% of cases

Asymptomatic

Heterogeneous

Autosomal dominant

Low secretion or quickly clear in circulation.

TYPE 2

Quantitative of deficiency of vWF

Mild to moderate disease 25% of cases

Four subtypes

TYPES 3

Complete quantitative deficiency of vWF

Severe disease

5% of cases

Homogeneous

Autosomal recessive

Complete absence of secretion due to defective gene

TYPES 4

Platelets qualitative Gplb

Autosomal dominant

Plts decreased

Plts affinity for vWF increase

CLINICAL FEATURES:

Most cases are of mild bleeding

Excessive bleeding from wounds

Menses bleeding increase

Spontaneous bleeding from mucous membranes (e.g. epistaxis)

In severe cases, similar to hemophilia A

Lab diagnosis:

CBC

Hemoglobin normal

Hematocrit normal

Platelets count normal and low in type 2b

Prothrombin time normal

Activated partial thromboplastin time increase

Fibrinogen normal

REFERENCE:

Essential of haematology Hoff brand

Essential of haematology McKenzie

Atlas of heamatology renu and saxena

Wikepedia and encylopedia etc

Q5: Explain Hemolytic uremic syndrome and it's types ?

Hemolytic uremic syndrome:

Hemolytic-uremic syndrome (HUS) is a group of blood disorders characterized by low red blood cells, once this process begins, the damage red blood cells acute kidney failure, and low platelets

Which may eventually cause the life-threatening kidney failure associated with hemolytic uremic syndrome.

Most cases of Hemolytic uremic syndrome develop in children after 2 to 14 days of diarrhea – often body – due to infection with a certain strand of Escherichia coli (E. coli)

Adult also may develop hemolytic uremic syndrome after an E. coli infection but the cause also may be certain medications,

Other types of infections, pregnancy or it may be unknown.

TYPES OF (HUS)

SHIGA TOXIC E.COLI :

Some of the E.coli strains that cause diarrhea also produce a toxic called shiga toxic-producing E.coli or STEC .

When you are infected with a strains of STEC, the shiga can enter your

Bloodstream and cause damage your blood vessels, which may lead to HUS.

S. PENEUMONIA:

it is associated with HUS (pneumococcal HUS) mainly is an uncommon condition mainly observed in young children. Early recognition is critical, because of the potential to improve morbidity and mortality. In your review we summarize the pathophysiology, clinical features, diagnostic difficulties and management of this potentially under- diagnosed condition.