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- SUBJECT:WBCS AND PLATELETS DISORDERS
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ANS#01)

HODGKIN LYMPHOMA:

- Occurs as a late complication in approximately 10% patients,
- other organs bone marrow GIT bone spinal cord ,may also be involved,

STAGING OF HODGKIN DISEASE:

- STAGE 01):
  Indicates node involvement in one lymph node,
- STAGE 02):
  Indicates disease involving two or more lymph nodal areas are Confined to one side of the diaphragm,
- STAGE 03):
  Indicates disease involving lymph nodes above and below the Diaphragm,
- STAGE 04):
  Indicates involvement outside the lymph node areas refers to Diffuse or disseminated disease in the bones marrow liver and other Extra nodal sites,

CLINICAL STAGING:

The selection of appropriate treatment depends on accurate Staging,
It is also due to chest X- ray, CT scan,

It is also used to monitor response to therapy,
Involvement of a single lymph node region, or of a single
Extra lymphatic organ or sites,
Involvement of two or more lymph node regions on the same side of the diaphragm or localized involvement of an extra lymphatic organ or site and one or more lymph node regions on the same side of the diaphragm.

- PRONOSIS:

Approximate 5 year survival rates range from 50% to over 90% depending on age, stage and histology.

ANS#02):

➢ HEMOSTASIS:

The procedure in which the body stop bleeding,
Hemostasis is precisely or chested process involving platelets, clotting factor, And endothelium that occurs at the site of vascular injury and culminates in The formation of a blood clot which serves to prevent or limit the extent of Bleeding,

➢ STEPS:

3 steps involve:

- Vasoconstriction
- Hemostatic plug/platelets plug formation
- Coagulation of blood,

➢ FACTORS NAMES:

- Fibrinogen
- Prothrombin
- Calium
- Labile factor
- Presence not proved
- Stable factor
- Ant hemophilia
- Christmas
- Stuart power factor
- Plasma thromboplastic or antecedent
- Hageman

➢ BLOOD CLOT:

A thickened that prevents blood clots formed by substances that stop

Substances, that stops bleeding,

➢ FIBRONOLYSIS:

Is a process that prevents blood clot from growing and becoming pathologic,
Prevents excessive fibrin decomposition,
It is the body defense against vascular occulting,

➢ FIBRINOLYTIC SYSTEM:

- Activation of coagulation also initiates fibrinolysis system so that the size of
- The clot is limited,
- The clot may progress and involve the entire circulation with its Consequences,
- Plasminogen may be activated either by:
- A factor XII dependent pathway or plasminogen activator,
- The most important of the (Pas): the most important of the pas is tissue
  Plasminogen,
- Plasmin cleaves fibrinogen and fibrin and produces number of fibrin Degradation,
- Products also known as fibrin split products,
- Clear minor clots in the vessels and restore the blood flow,
  Elevated levels of FDPs,
  The activity of t-PA and urokinase is controlled by releasing Plasminogen,

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ANS#03):

➢ HEMOPHILIA:

- Hemophilia A and B are similar in both clinical and pathological features, the difference being in the deficient factor,
- Both are sex linked recessive disorders resulting in inherited deficiency of the clotting factor of a defective clotting factor, males are affected and female,

➢ HEMOPHILIA (A):

- Hemophilia is the most common hereditary x-linked recessive disease with a reduction,
- Factor VIII serves as a cofactor for factor IX in the activation of factor,

➢ MODE OF INHERITANCE IN HEMOPHILIA IS:

- RISKS OF TRANSMISSION TO CHILDREN:
- When female is a carrier and male is normal,
- The 25% of children may be normal Male , 25% normal female 25% female carrier and 25% may be hemophilic male,

➢ WITH NORMAL FEMALE AND THE HEMOPHILIC MALE (NORMAL FEMALE):

CLINICAL FEATURES:

- Moderate to severe deficiency of factor VIII presents with easy bruising and massive bleeding
- Are usually milder than those of hemophilia A , in both the diseases ,
- In hemarthrosis is the common presentation ,
- Treatment is by infusion of factor IX,

➢ LABORATORY DIAGNOSIS:

- Bleeding time: normal
- Clotting time: prolonged
- Platelet count: normal
- Prothrombin time: normal.

ANS#04):

➢ VON WILLEBRAND DISEASE:

- First in 1926 by Finnish physician DR ERIK VON WILLEBRAND,
- Most is researchers agree that von disease is the most common genetic bleeding disorder,
- Glycoprotein and composed of 2050 amino acids
- It is autosomal dominant inheritance disease pattern
- Male and female are affected equally

➢ PHYSIOLOGY:

- LOCATION:

  Circulating in blood plasma

  STORE:

Mainly in weibal palate bodies of endothelial cells,
AI and CI dominant for PLTS, A3 domain for collagen and D3 for RECEPTOR:
FVIII,
CYTOGENIC LOCATION:
Coagulation factor VIII or F8VWF,

➢ Function:

- Mainly have two roles:
- VW factor primary function is binding to particular factor VIII and factors VIII is bound to VWF while inactive in circulation,
- It is important in platelet adhesion to wound sites,

➢ PATHOPYSIOLOGY:

- 1)HEREDITORY VWD
  - ❖ QUALITATIVE
    - ✓ Type I
    - ✓ TYPE II
  - ❖ QUALITATIVE
    - ✓ Type II
    - ✓ Platelets type
- 2)ACQUIRED VWD:
  - ✓ Antibodies against vwf

➢ LAB DIAGNOSIS:

- ❖ CBC
- ❖ HEMOGLOBIN
- ❖ HEMATOCRAITS
- ❖ PROTHROMBIN TIME NORMAL
- ❖ FIBRINOGEN NORMAL
- ❖ BLEEDING TIME:PROLONGED
- ❖ CLOTTING TIME:PROLONGED
- ❖ THROMBIN TIME:NORMAL
- ❖ FACTOR VIII DECREASE,

ANS#05):

➢ HEMOLYTIC UREMIA SYNDROME:

- Is a condition that results from the abnormal premature destruction of red Blood cells,

- Once this process begins the damaged of red blood cell starts to clog the filtering system in the kidneys, which may eventually cause the life threating kidney,
- Most cases of hemolytic uremia syndrome after two to 14 days of diarrhea often bloody due to infection with certain strain of E COLI,

➢ SIGN AND SYMPTOMS:

- Bloody diarrhea and vomiting
- Abdominal pain
- Pale skin
- Fatigue and irritability
- Fever
- Blood in urine
- Decreased urination or blood in the urine
- Swelling of face hands feet or entire body,

➢ RISK FACTORS:

- Those most at risk of developing hemolytic uremia syndrome are:
- Children under 5 years of age
- People who have certain genetic changes that make them more susceptible,

➢ ETIOLOGY:

- Under cooked meat
- Un pasteurized or raw milk
- Unwashed contaminated raw fruits and vegetables
- Contaminated swimming pools
- Inheriting a certain type of hemolytic uremia

➢ TYPICAL HUS:

- Mostly with diarrhea often bloody diarrhea

➢ ATYPICAL HUS:

- The familial form is associated with genetic abnormalities.

➢ COMPLICATION:

- Sudden acute kidney failure
- High BP
- Chronic kidney failure
- Heart problem
- Stroke

- Coma

➢ MAIN POINTS:

- Level of serum haptoglobin which binds hemoglobin are decreased,
- Increased D-dimer and fibrinogen –degradation products,,,