BLEEDING DISORDERS

DEFINITION:

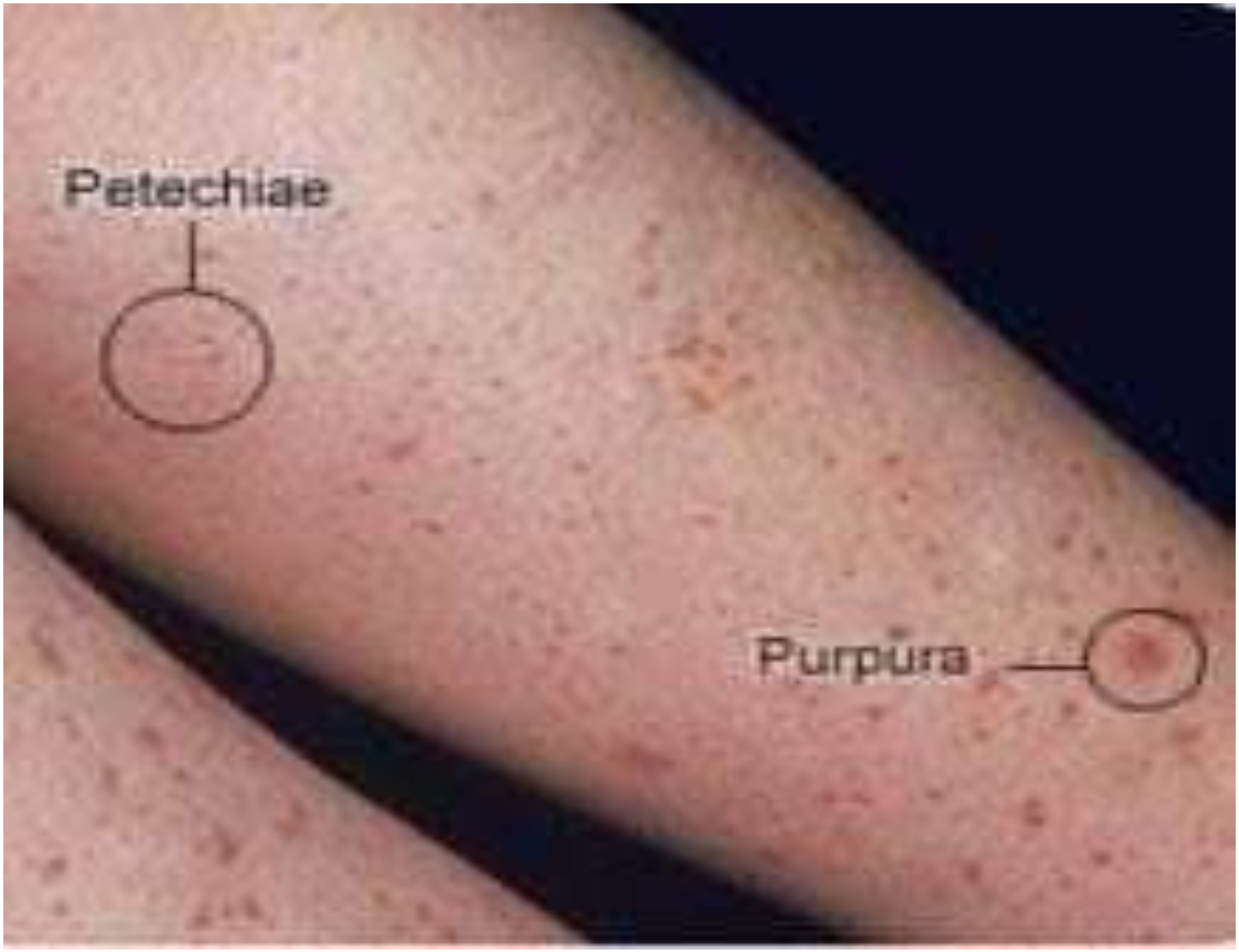
- A **bleeding disorder** is a condition that affects the way of **blood** normally clots.
- These disorder are characterized by spontaneous bleeding or excessive bleeding after trauma.

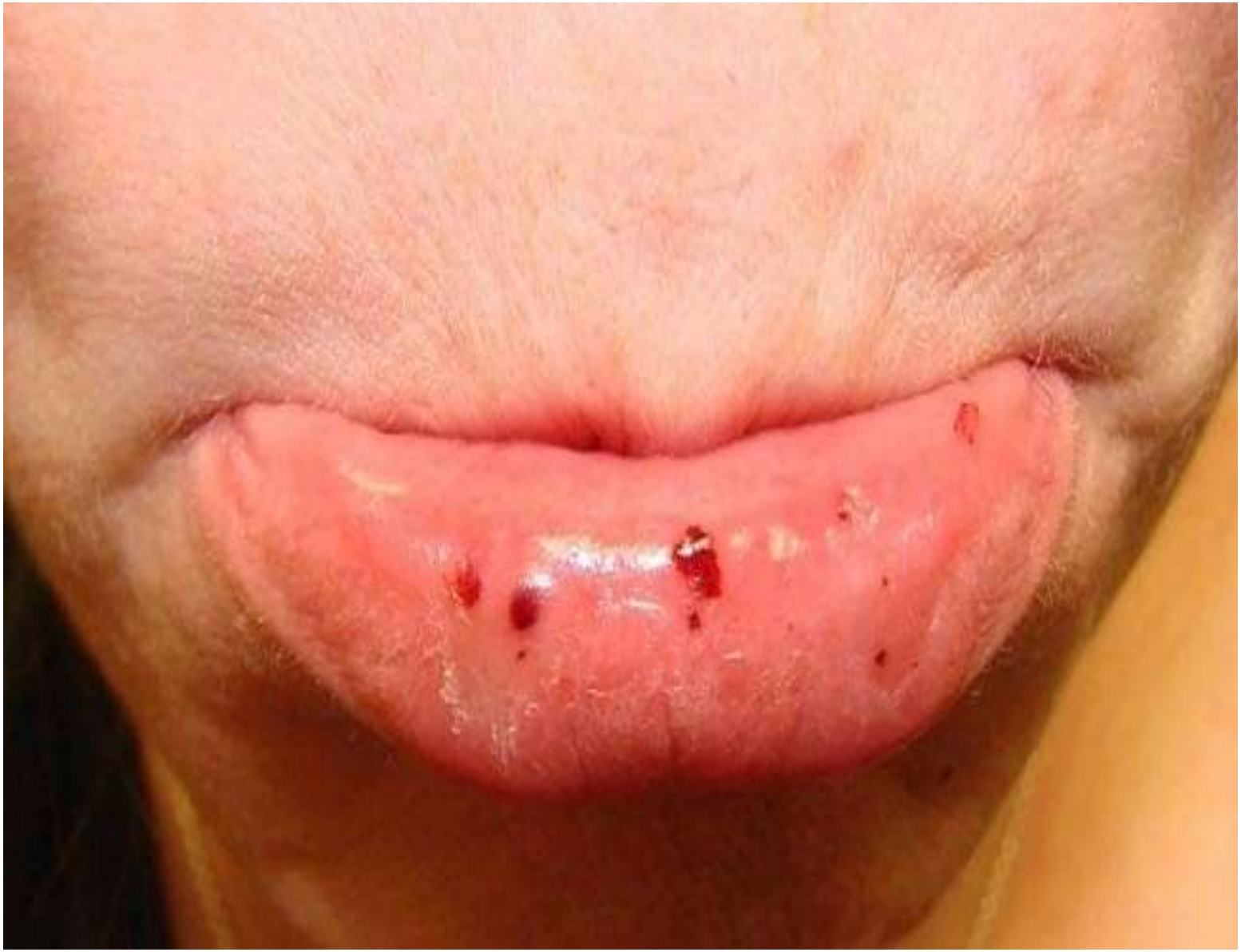
- Bleeding disorder are the Characterized by a prolonged bleeding time or clotting time.
- **Bleeding disorders** can be the result of other diseases, such as severe liver disease or a lack of vitamin K. They can also be inherited

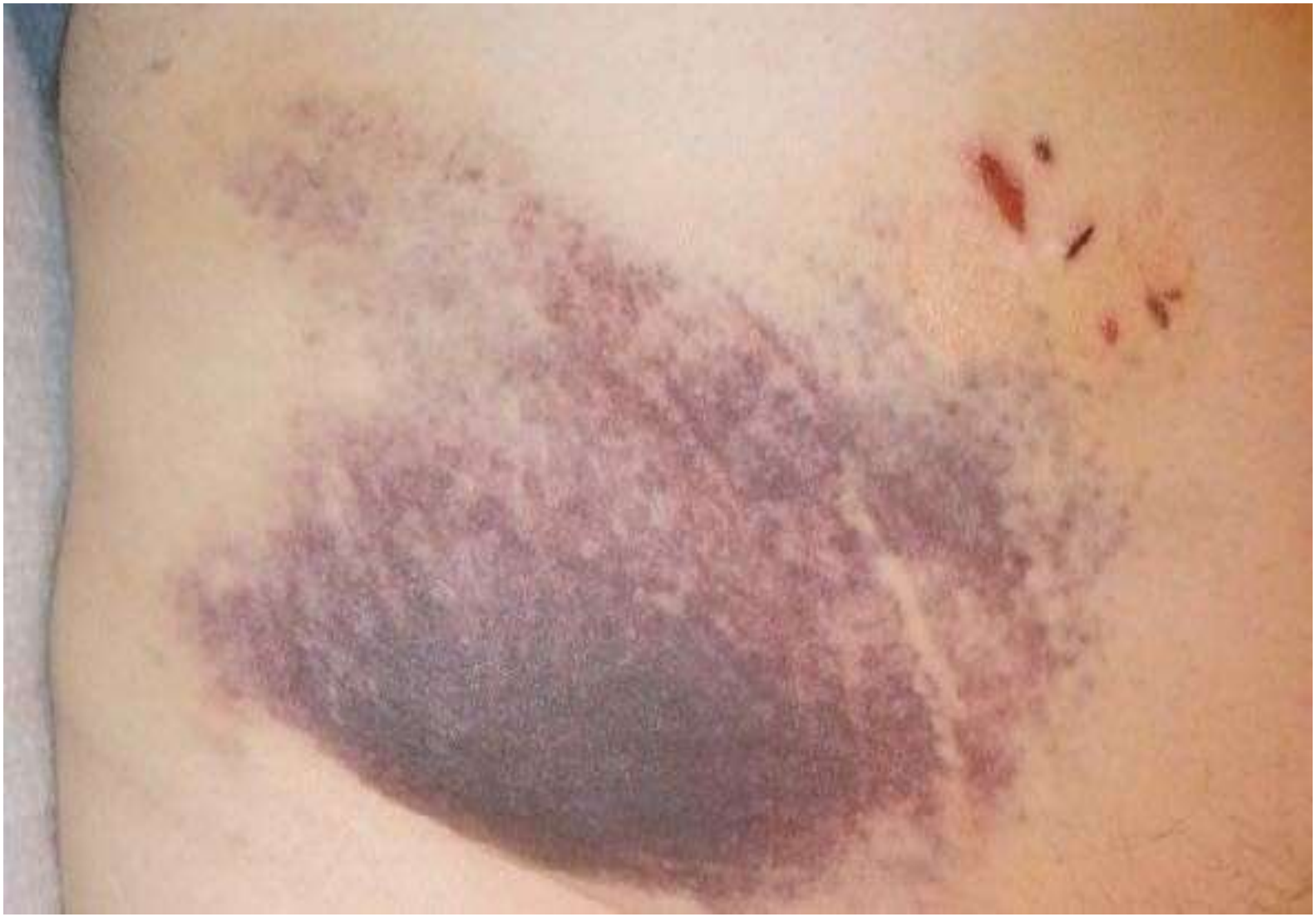
GENERAL TERMS:

- Haemorrhage generally indicates extravasation of blood due to rupture of blood vessels.
- However rupture of the large arteries are due to vascular injury, including trauma, atherosclerosis or inflammatory or neoplastic erosion of the vessel wall.
- Haemorrhage may be external or enclosed within the tissues, the accumulation is referred as a Hematoma.
- Minute heamorrahage – PETECHIAE
- Slightly large hemorrahage – PURPURA
- subcutaneous hematoma – ECCHYMOSES

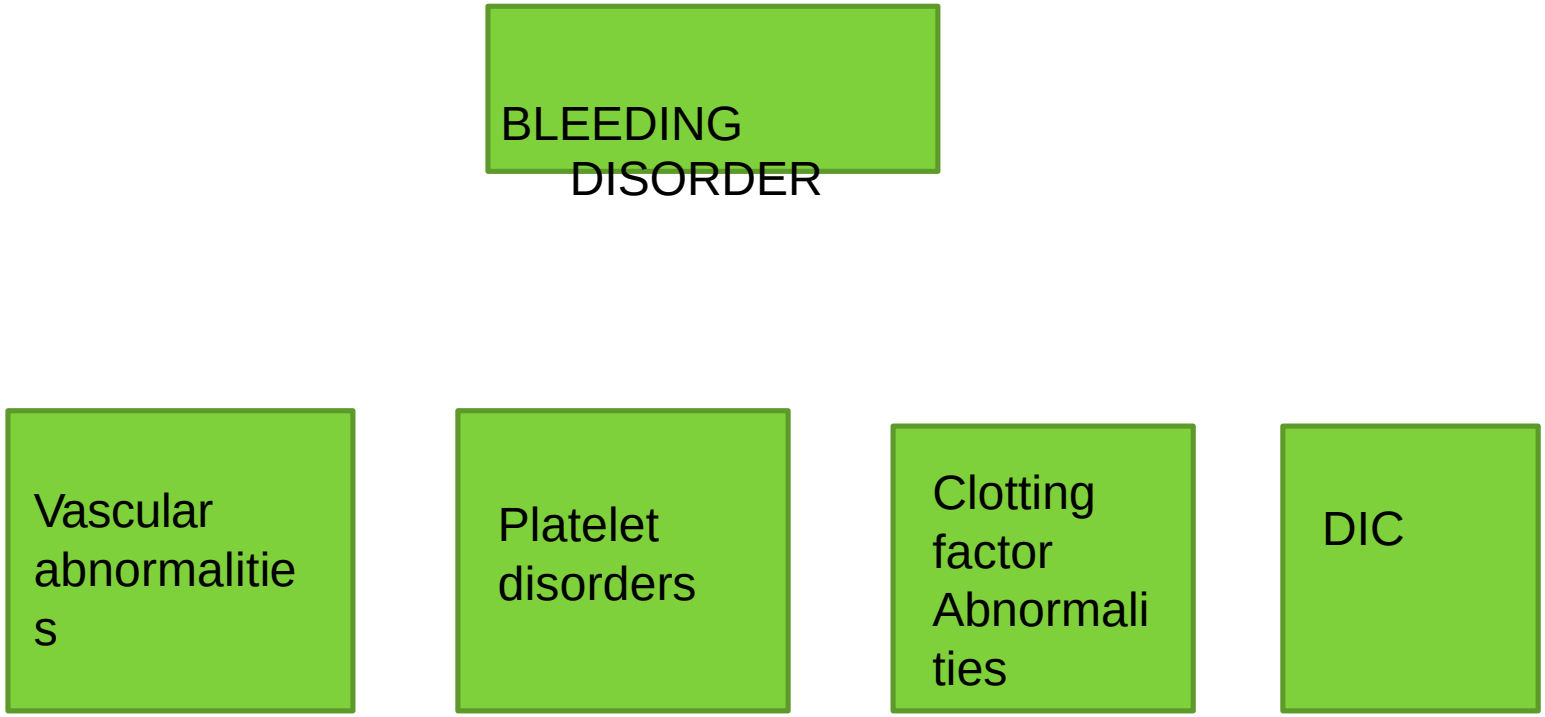

EYE ROUNDS.ORG


Petechiae
Purpura





CAUSES:


BLEEDING DISORDER
Vascular abnormalities
Platelet disorders
Clotting factor Abnormalities
DIC

VASCULAR ABNORMALITIES:

- Also known as non thrombocytopenic purpura or vascular purpura are normally mild and characterised by petechiae, purpura or echymoses confined to the skin and mucous membrane.
- It may be of inherited or acquired

Inherited:

Hereditary haemorrhagic telangiectasia: [osler – weber – rendu disease]:

- It is uncommon inherited autosomal dominant disorder. The condition begins in childhood and is characterised by abnormally telangiectatic [dilated] capillaries it develop in the skin, mucous membranes and internal organon
- There is frequent episodes of bleeding from the nose and GIT.

ACQUIRED:

Henoch schonlein purpura:

- It is a selflimted type of hypersensitivity vasculitis occuring in children and young adults.
- The hypersensitivity vasculitis produces purpuric rash on the extensor surfaces of arms, legs and on buttocks
- Haematuria, colicy abdominal pain due to bleeding into the GIT, polyarthralgia and acute nephritis.

HAEMOLYTIC URAEMIC SYNDROME:

- It is a disease of infancy and earlyhood in which there is bleeding tendency and varying degree of acute renal failure.
- It relate more with renal system.

SIMPLE EASY BRUISING:

Devil's pinches:

easy bruising of unknown cause is a common phenomenon in women of child bearing age group.

Infection:

- Many infections cause vascular haemorrhages either by causing toxic damage to the epithelium or by DIC. These are especially prone to occur in septicaemia and severe measles.
- DRUG REACTION:

  certain drugs produce hypersensitivity responsible abnormal bleeding.

Steroid purpura:

- Long term steriod therapy or cushing's syndrome may be associated with vascular purpura due to defective vascular support
- SENILE PURPURA:
- Atrophy of supportive tissue of cutaneous bloos vessels in old age may cause senile atrophy, especially in the dorsum of forearm and hand.

SCURVY:

- Deficiency of vitamin C causes defective collagen synthesis which causes skin bleeding as well as bleeding into muscles and occasionally into gastroinstestinal and gentio urinary tracts.

Due to Platelet disorder:

- It is due to 3 mechanisms
- Due to reduction in number of platelets
- Due o rise in platelet count
- Due to defective platelet functions

Thrombocytopenia:

- It is defined as a reduction in the periphral blood platelet count below the lower limit of normal i.e below 150,000/ul.
- It results from
  - Impaired platelet production
  - Accelerated platelet destruction
  - Spleenic sequestration
  - Dilutional loss

C/F:

- Petechial haemorrhages, easy bruising and mucosal bleeding such as menorrhagia in women, nasal bleeding, bleeding from gums, melaena and haematuria
- Splenomegaly and hepatomegaly may occur in cases with chronic ITP but lymphadenopathyis quite uncommon.

Thrombocytosis:

- It is defined as platelet count in excess of 4,00,000/ul.
- c/f:

  Massive haemorrhage.

  Severe sepsis.

Disorder of platelet:

- Hereditary disorders:

  Defective platelet adhesion.

  Defective platelet aggregation

  Disorders of platelet release reaction.
- Acquired disorder:

  It may be of drug induced.

COAGULATION DISORDER:

- Coagulation factor deficiency may be congenital or acquired and may affect one or several of the coagulation factors.
- CONGENITAL: Haemophillia A
  Haemophillia B or christmas disease.

ACQUIRED :

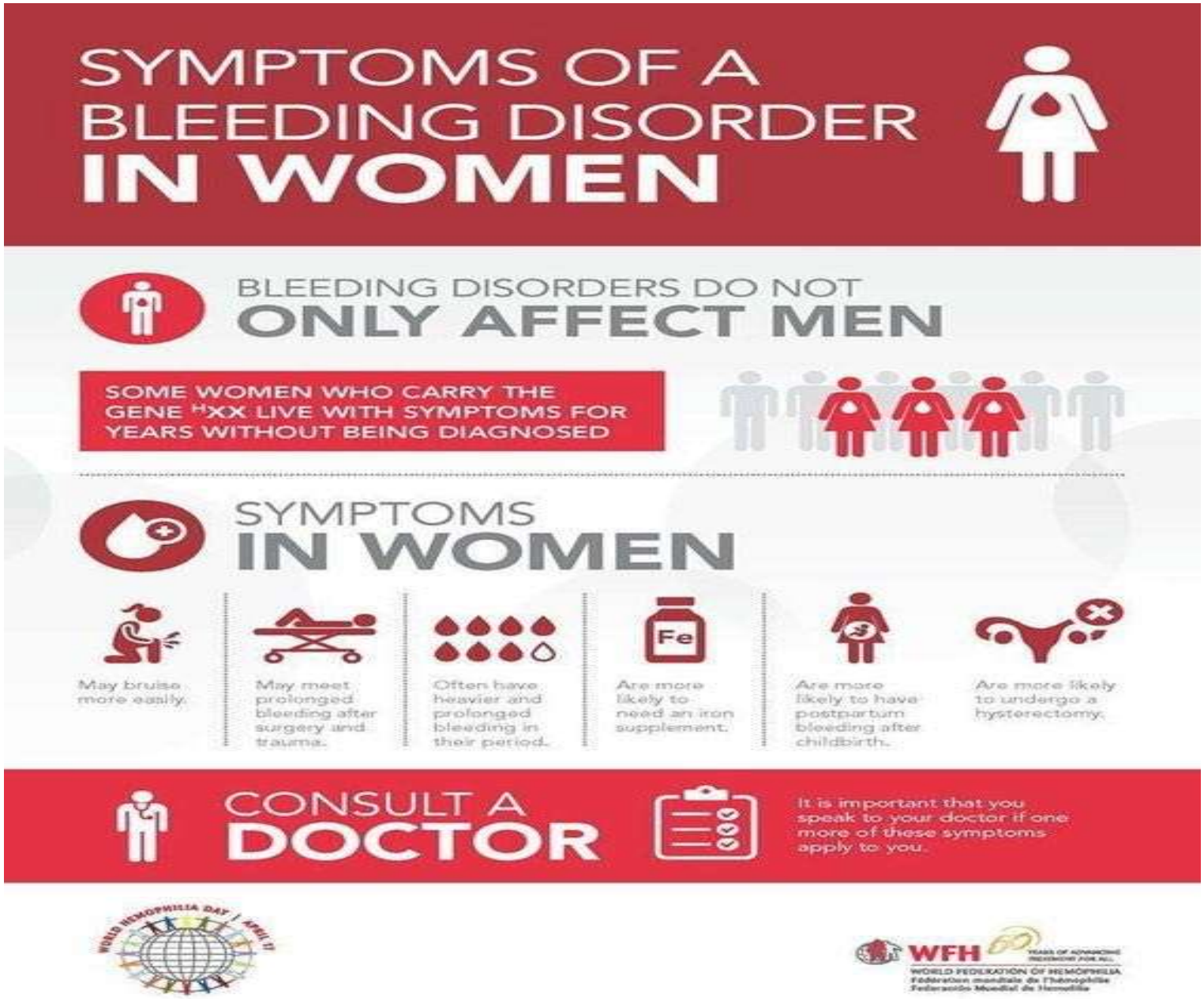
-Vitamin K deficiency

-coagulation disorder in liver diseases

-fibrinolytic defects.

CLOTTING FACTORS

Factor I	Fibrinogen
Factor II	Prothrombin
Factor III	Tissue Thromboplastin
Factor IV	Calcium Ions
Factor V	Labile Factor
Factor VII	Stable Factor
Factor VIII	Antihemophilic Factor
Factor IX	Christmas Factor, or Plasma Thromboplastin Component (PTC)
Factor X	Stuart-Prower Factor
Factor XI	Plasma Thromboplastin Antecedent (PTA)
Factor XII	Hageman Factor
Factor XIII	Fibrin Stabilizing Factor


SYMPTOMS OF A BLEEDING DISORDER IN WOMEN
BLEEDING DISORDERS DO NOT ONLY AFFECT MEN
SOME WOMEN WHO CARRY THE GENE HXX LIVE WITH SYMPTOMS FOR YEARS WITHOUT BEING DIAGNOSED
SYMPTOMS IN WOMEN
Fe
May bruise more easily.
May meet prolonged bleeding after surgery and trauma.
Often have heavier and prolonged bleeding in their period.
Are more likely to need an iron supplement.
Are more likely to have postpartum bleeding after childbirth.
Are more likely to undergo a hysterectomy.
CONSULT A DOCTOR
It is important that you speak to your doctor if one more of these symptoms apply to you.
WORLD HEMOPHILIA DAY | APRIL 17
WFH
WORLD FEDERATION OF HEMOPHILIA

Injury Occurs

1. Injury to blood vessel results in bleeding.

2. Vessel constricts and clotting factors are activated.

Normal

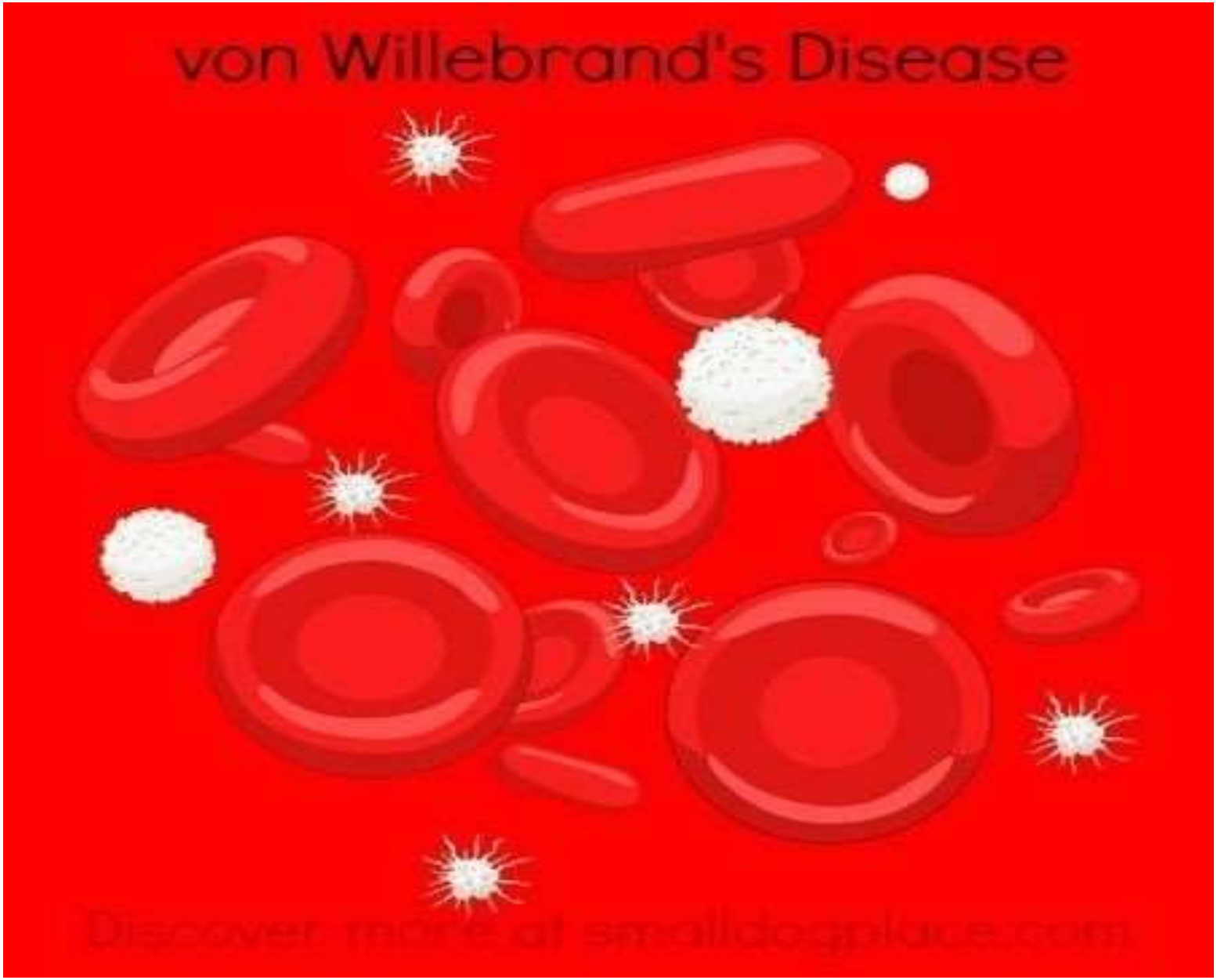
3. Along with other substances, clotting factor VIII causes a strong platelet plug to form.

4. A stable fibrin clot forms over the platelet plug as a final seal on the injury, and the bleeding stops.

Hemophilia A

3. Lack of clotting factor VIII causes a weak platelet plug to form.

4. Incomplete and/or delayed fibrin clot allows bleeding to continue.


von Willebrand's Disease

Vonwillibrand's disease:

- It is the most common hereditary coagulation disorder occurring due to qualitative and quantitative defect. The main function of vWF is to facilitate then adhesion of platelet to sub endothelial collagen, while factor VIII is involved in activation of X factor in the intrinsic coagulation pathway.
- It also includes spontaneous bleeding from mucous membrane.

BLEEDING DISORDERS

Disease	Cause	Genetics	Gender Affected
Hemophila A	Decreased Factor VIII	Sex linked recessive trait	Males
Hemophilia B	Decreased Factor IX	Sex linked recessive trait	Males
Hemophila C	Decreased Factor XI	Autosomal trait	Males and Females
vWD	Dysfunction in platelet adhesiveness and defect in factor VIII	Autosomal trait	Males and Females
Immune Thrombocytopenia	Platelet adhesion problem usually secondary to immunoglobulins	None	Males and Females

vWD = von Willebrand's Disease

*source - Wolters Kluwer Health

Common Symptoms of a bleeding disorder include:

- Bleeding into joints, muscles and soft tissues.
- Excessive bruising.
- Prolonged, heavy menstrual periods (menorrhagia)
- Unexplained nosebleeds.
- Extended bleeding after minor cuts, blood draws or vaccinations, minor surgery or dental procedures.