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CLASS : MLT 2ND SEC B

SUBJECT : HAMAETOLOGY

EXPLAIN THE FOLLOWING :

1 : LEUKOPENIA : is a decrease in the number of leukocytes. Found in the blood, they are the white blood cells, and are the body's primary defense against infection. Thus leukopenia places individuals at increased risk of infection. Symptoms may include mouth or skin sores, sore throat, cough, trouble breathing, feeling light-headed, fever, chills, or body aches.

SYMPTOMS :

There are no specific symptoms of having a low white blood cell count. However, when someone has leukopenia, they are more likely to get infections. The symptoms of infection include:

fever

sweating

chills

CAUSES : There are several medical conditions that cause leukopenia by interfering with the production of white blood cells in the bone marrow.

Other conditions cause leukopenia by destroying white blood cells rather than affecting their production. Leukopenia may also be the result of some treatments and medications.

2 : LYMPHOCYTOSIS :

Lymphocytosis (lim-foe-sie-TOE-sis), or a high lymphocyte count, is an increase in white blood cells called lymphocytes. Lymphocytes help fight off diseases, so it's normal to see a temporary increase after an infection.

SYMPTOMS :

Lymphocytosis itself does not cause symptoms. However, you may experience symptoms from the underlying cause of lymphocytosis. Depending on the cause, symptoms may range from no symptoms to severe.

CAUSES :

Lymphocytosis results from increased numbers of lymphocytes in your blood. Lymphocytes are a type of white blood cell. They play an important role in your immune system, helping your body fight off infection. Many underlying medical conditions can cause lymphocytosis.

High lymphocyte blood levels indicate your body is dealing with an infection or other inflammatory condition. Most often, a temporarily high lymphocyte count is a normal effect of your body's immune system working. Sometimes, lymphocyte levels are elevated because of a serious condition, like leukemia

3 : LYMPHOPENIA :

A condition in which there is a lower-than-normal number of lymphocytes (a type of white blood cell) in the blood. Also called lymphocytic leukopenia and lymphocytopenia.

SYMPTOMS :

fever.

cough.

runny nose.

enlarged lymph nodes.

small tonsils or lymph nodes.

painful joints.

skin rash.

night sweats.

CAUSES :

most often due to AIDS or undernutrition, but it also may be inherited or caused by various infections, drugs, or autoimmune disorders

4: BASOPHILIA :

Basophilia is defined as an absolute increase in the number of basophils. Reference values vary from laboratory to laboratory, but an absolute count of basophils greater than $0.2 \times 10^9/L$ is considered a true basophilia

SYMPTOMS :

fatigue.
muscle aches and pains.
swelling.
mild fever.
numbness and tingling in the hands and feet.
skin rashes, in the case of psoriasis.

5: NUTROPHILIA :

Neutrophilia is an increase in circulating neutrophils above that expected in a healthy individual of the same age, sex, race and physiological status. This represents an increase in the neutrophil count above $7.5 \times 10^9/l$ and is one of the most frequently observed changes in the FBC.

SYMPTOMS :

low-grade fever,
skin abscesses,
mouth sores,
swollen gums

6 : THROMBOCYTOSIS :

Thrombocytosis is a condition in which there is an excessive number of platelets in the blood. Platelets are blood cells in plasma that stop bleeding by sticking together to form a clot. Too many platelets can lead to certain conditions, including stroke, heart attack, or a clot in the blood vessels.

SYMPTOMS :

Most patients do not have any symptoms of an increased platelet count. When symptoms do appear, they can include skin bruising or bleeding from various areas such as the nose, mouth, and gums, or the stomach and intestinal tract

7: THROMBOCYTOPENIA :

Thrombocytopenia is a condition in which you have a low blood platelet count. Platelets (thrombocytes) are colorless blood cells that help blood clot. Platelets stop bleeding by clumping and forming plugs in blood vessel injuries.

SYMPTOMS :

Unexpected bruising.
Small purple or red spots under the skin, called petechiae.
Bleeding from the nose or gums.
Heavier-than-usual menstrual periods in women.
Black or bloody bowel movements.
Red- or pink-colored urine.
Bloody vomit.
Severe headaches.

8: POLYCYTHEMIA :

Polycythemia refers to an increase in the number of red blood cells in the body. The extra cells cause the blood to be thicker, and this, in turn, increases the risk of other health issues, such as blood clots.

SYMPTOMS : Many people with polycythemia vera don't have noticeable signs or symptoms. Some people might develop vague symptoms such as headache, dizziness, fatigue and blurred vision.

9: ANEMIA : Anemia is a condition in which you lack enough healthy red blood cells to carry adequate oxygen to your body's tissues. Having anemia can make you feel tired and weak. There

are many forms of anemia, each with its own cause. Anemia can be temporary or long term, and it can range from mild to severe.

ANEMIA IS OF THREE TYPES

Normocytic anemia

Microcytic anemia

Macrocytic anemia

SYMPTOMS : Extreme fatigue.

Weakness.

Pale skin.

Chest pain, fast heartbeat or shortness of breath.

Headache, dizziness or lightheadedness.

Cold hands and feet.

Inflammation or soreness of your tongue.

Brittle nails.

10 : LEUKEMIA :

Leukemia is a malignant hemotological disorder characterized by proliferation of abnormal white cells that infiltrate the bone marrow ,peripheral blood and organs

Two types :

ACUTE LEUKEMIA

CHRONIC LEUKEMIA

SYMPTOMS :

Fever or chills.

Persistent fatigue, weakness.

Frequent or severe infections.

Losing weight without trying.

Swollen lymph nodes, enlarged liver or spleen.

Easy bleeding or bruising.

Recurrent nosebleeds.

Tiny red spots in your skin (petechiae)

11: RETICULOCYTOSIS :

Reticulocytosis is a condition where there is an increase in reticulocytes, immature red blood cells. It is commonly seen in anemia. They are seen on blood films when the bone marrow is highly active in an attempt to replace red blood cell loss such as in haemolytic anaemia, haemorrhage.

SYMPTOMS : feeling weak and tired, short of breath, or having headaches and chest pain