

Subject: hematology Lab

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Explain the following.

1;Leukopenia

Ans ; decrease in white cells

. Refers to a low total white blood cell count at may be due to any cause Lymphopenia enia in neutropenia.

Almost all leukopenic patients are neutropenic science the number of neutrophils is so much larger than the number of lymphocytes.

2;Lymphocytosis

Ans ; Lymphocytes _low

- not usually clinically significant

. Lymphocytes- high

isolated elevated count not usually significant causes

. acute infection(viral bacterial)

. Smoking

. Hyposplenism

. Acute stress response

autoimmune thyroiditis

. CLL

3;Lymphopenia

Ans ; lymphocyte Count on Fbc in adult patients that is below the lower limit of normal range

. Lymphopenia is common finding especially in elderly patients where are at is frequently of no clinical significance no further investigation is advised in elderly patients with a lymphocyte count $>0.5 \times 10^9/l$ in the absence of any concerning symptom

. Lymphopenia may reflect a response to stress such is in acute infection, recent surgery or be iatrogenic secondary to medication, immunosuppressant drugs such a steroid. Most cases are reversible and do not require a specialist evaluation.

4;Basophilia

Ans ; it is the condition of having greater than 200 basophils in the venous blood. basophils are the least numerous of the myelogenous cells, it is rare for their numbers to be a normally High without changes to other blood components.

5.Neutrophilia

Ans;Neutrophilia also called Leukocytosis or occasionally neutrocytosis is Leukocytosis of neutrophils that is a high number of neutrophils and the blood because neutrophils are the main type of granulocyte mention of granulocytosis often overlap in meaning with Neutrophilia.

6;Thrombocytosis

ANS ;Thrombocythemia (THROM-si-THE-me-ah) and, thrombocytosis(THROM-bo-si-TO-sis) are condition and which your blood has a higher than normal number of platelets(PLATE-lets) platelets are blood cell fragments. they are made in your bone marrow along with other kind of blood cells.

7:Thrombocytopenia

Ans : Thrombocytopenia is a condition in which you have a low blood platelet count. platelets (Thrombocytosis) colorless blood cell that help blood clot. platelets stop bleeding by clumping and forming plugs in blood vessel injuries.

8;Polycythemia

Ans ". Is above normal hemoglobin levels

., secondary Polycythemia which is may be due to:

- . Dehydration (Severeburns, diarrhea, vomiting, etc)
- . Severe lung or heart diseases.
- . Living at high altitude.
- . Heavy smoking.
- . Primary polycythemia which is do malignant variation in blood cells production in bone marrow.

9:Anemia

Ans : anemia is a functional inability of the blood to supply the tissue with adequate O₂ for proper metabolic FUNCTION.

- . Anemia is usually associated with decreased level of hemoglobin or a decrease RBC count.
- . When you conclude that a patient has aneMia that is not a diagnosis but rather the expression of any underline disorder or disease.

10:Leukemia

Ans :Leukemia is a cancer which stars and blood forming tissue, usually the bone marrow. At leads to the over production of abnormal white blood cell part of the immune system which depends the body against infection.

11.Reticulocytosis

Ans. (increased RBC production)

reticulocyte index>33% Reticulocytosis count >1.5%

1. Acute blood or hemorrhage
2. Post - splenctomy
3. Acute Hemulytic anemia(microangiopathic Anemia)
- 4 Hemoglobinopatthy
 - . Sickle cell Anemia
 - . Thalassemia major
5. Post - anemia treatment
 - . Folate supplementation

. Iron supplementation

. Vitamin B12 supplementation.