

Paper wbc disorder

Instructor name = Mam saima hadi

Student name=zahid shah

=Program BS (MLT) 4th semester

=ID 14884

Q1.What is leucopoiesis , and also explain its types

Answer :

Leukopiosis =

Leukopiosis is a form of hematopiosis in which wbc's are formed in bone marrow, located in bones in adult organ and hematopiosis organ in the fetus.

Types of Leukopiosis

Granulopiosis

A Granulopiosis

GRANULOPIOSIS

=(1) polymorphonuclear neutrophil.

= multi long (3-4)nucleus.

=connected by filament .

=five neutrophil lysosomal granules.

Life span 2-5 days.

Function

Chemotactic (release chemical against antigen phagocytosis)

Differential :

50-70 normal in the body.

=(2) Eosinophil :

=Bi-lobed (2segment nucleus)

=Blue cytoplasm and orange red granules.

Function :

Defense against parasitic infection

Allergic reaction

Differential :

3-4

Life span 7 to 12 days

=(3) Basophil:

=lobulated

=purple staining granules.

=circulated in blood and migrate in tissue where they become "Mast cell".

Differential :

1-2 percent

Life span :

12- 15 days

Function :

=immediate hypersensitivity.

=allergic reaction

Granules histamine and heparin.

A Granulopoiesis :

Derived from CFU-GM, CFU-GM, CFU-GM

=Myeloid stem cell

=myelomonoblast

=promonocyte

=Monocyte

=macrophage

Monocyte =

= Kidney shape

= no specific granules

=increase count monocytosis

=Normal range 2-10percent

Function in tissue where differentiat into macrophage

Lymphocyte =

= large nucleus

= range = 15-40percent

= increase count lymphopoesis

=lymphoid stem cell

= lymphoblast

= prolymphocyte

=lymphocyte

T lymphocyte. B lymphocyte .

Q2.Compare all phases (Chronic ,Accelerated, Blast)of CML?

Answer no 2=

Chronic phase=

= 85percent patient are in the chronic phase

=Madian duration 5-6 year

= few blast often symptom

= raised TLC with left shift

=no splenomegaly

=no anemia

= blast less than 10percent

Accelerated phase=

Median duration 6-9 months

= worsening TLC/s megaly, unresponsive to treatment

= 10-19 myeloblast in the bone marrow

=>20/ basophils in the bone marrow

=platelets <1 lakh />10 lakh

Blast phase =

= Median duration 3-6months

= blast >20/ often resistant to chemotherapy

= the speed of blast growth resemble

= >20/ myeloblast in bone marrow

= like acute leukemia.

Q3. Explain Leukemia and its causes ?

Answer no 3=

Leukemia =

The type of bone marrow and blood cancer characterized by abnormal production of WBCs.

= leukemia are neoplastic proliferation of cells.

Many type of leukemia exist. Some form of leukemia are more common in children and other form of leukemia occur in adult.

Causes of leukemia =

The exact cause of leukemia is not known but it is thought to involve a combination of genetic and environmental factors.

=hereditary (down syndrome)

=infection(human T-cells leukemia)

Environmental factors =

Ionization radiation

Chemical carcinogens

Certain drugs.

Q4 .Differentiate between Acute and Chronic leukemia?

Answer no4=

There are many difference in the acute and chronic leukemia.

Acute leukemia =

	Acute	Chronic
Age.	All age	usually adult
Onset.	Sudden.	Insidious
Duration.	Week to month.	Year
Leukemia cells	>20/ immature blast cells.	More mature cells
WBCs count.	Variable.	High
Thrombocytopenia.	Mild to sever.	Mild
Organomegaly.	Mild.	Prominent
Splenomegaly prominent	mild.	Present, often

Q5. Discuss Rai Classification of chronic lymphocytic leukemia?

Answer no 5=

In this staging system CLL is divided into five different stage from zero to four .which is shown in the chart.

Staging.	Lymphocyt	Lymphonod.	Spleen.	Platelets count.	Survival
0.	Increased.				12.5years
1.	Increased.	Enlarged.			8.5years
2.	Increased.	Enlarged/some.	Enlarged.		6years
3.	Increased.	Enlarged /some.	Enlarged.		1.5years
4.	Increased.			Decreased.	1.5years

Q6.Explain chronic myeloid leukemia causes and symptoms?

Answer no 6=

Chronic Myeloid leukemia =

Chronic Myeloid leukemia is usually began after age 60.common features of chronic Myeloid leukemia are include excessive tiredness (fetigue) fever and weight loss The chronic Myeloid leukemia are slowly appear the symptoms and predominant increase all granules.

Causes of chronic Myeloid leukemia =

Chronic Myeloid leukemia are caused by rearrangement of genetic material chromosomes no 22 or 9.

=spleenomegaly

=blast crisis

=difficult to control over production of wbcs blast cell.

Symptom of chronic Myeloid leukemia =

=fever

=fetigue

=weight loss

=easy bleeding and brushing

= joint and bone pain

Loss of appetite

=weakness