Histology Blood (2)

Sheet 1_2
Eukaryote cell:

1: A nucleated:have no nuclues RBC(Mature) .

2:some have one nuclues .
3: bi nucleated: have 2 nuclues 25% of liver cell .
4: multi nucleated: have mor than 2 nuclues (50 nuclues) because cell are crossed on each other like :
Muscle cell : have a flattened nuclues on peripheral.
5 : Multi looped : have one nuclues but in loop shape (comected by chromaten).

WBCs
1_ granular :
*contain specific granules in it's cytoplasm .
* contain non specific a zurophilic granules.
1_ A granules
* dont contain any specific granules in it's cytoplasm.
* contain non specific a zurophilic granules.

NOT :
1- platelets : it is afragment of migakaryocyte which present in bone marrw .
2- anather name fore platelets : thrombocytes (making a throbus)

**
1-granular leucocytes
-Neutrophils : stain with neutral stain
- asoinophils : stain with eosin stain
- basophils : stain wth basophilic stain(methylene blue)
A granular
Mono cytes
Lymphocytes

Not
: all WBCs is rounded .
Basopils : can be from 0-1% cnormals.

Sheet (4_5_6_7)

1- granular leukocyt
A- Matropilic :
1_ather nams :microphage
*polymorphnuclear leucocytles: have loopd nuclues in different shapes (more maturatian _

more looped)
* pus cell : produces pus
2_ barr body : condensed _ un active chromosome.
((Just in famale))

3-becuase its phagocytosis function it has irregular sha which help in amoeboid movement .

4 - its condain azurophilis granules which contain lysosomes and secret hydrolitic enzymes.
Lysosomes : help in damage of foregin substance and produce the (pus)

Spacific granules VS azurophilic gramules
Small / numerais. Few / large

------^ in neutrophilis non spacific granules is larger than spacific granules, because the spacifi are too small and rice grain

------^spacific granulas secret collagenase enzyme which also help in damge any foregin substant and produces pus.

**Function :
1- phagocytosis: by secrele achimichal substanls that go out the neutrophils and kill the bacteria.

**Example of chmical substans::cenzymes.
1-collagnase enzame .
2- hydrolitic enzyme.

*stamulation the bone marrow :
toproduce more Attract monocytes .
*attract to help on defense functions.

NOT:
Pus cell (neutrophils) considar as the first line of defense.

Abnormalites :
♡Neutrophila:.
+Number a cule inflamation
Example: dermatitis
♡Neutrapenia:--number sever infection .
Example: TB: Liver disease.

Not: any effect on the bone marrow also affects in dicrease on phagocyte like esoinphils or neutrophilis.
*rdiation / chemotherapy / cortezom therapy / sever infection lead to damage the bone marrow.

Sheet (8_10)

Eosone phils
-----^acidophilic granules.
-----^multi loop nuclues.
-----^contain:
1-spacific granulas :---^ large .
----^with crystallid core which contain hydrolytic enzayme.
----^contain histamiase enzaym.
----^ perosidase enzayme.
2- noni spacific grand .

*Fun: in parasitic infection and allergic condition .
-----^ not phagocytico : it just secret histamine and peroxaid to response with inflamation ,dont swallow the dllergens .

----^ exist in : GIT / Respirotry trace as
" free connectiv tissue cell ".

**Abnormal:
Eosinphilia : increase in number:
Example:
Allergic : dermatities./asthma
Parastic infection :Bilharzasis

Sheet (11-15)

------^multi (S shap) (biloobed)
------^ nucluas is serranded by the granules so it's not clear .
-----^ named as mast cell of blood because it's contain histamime and heparin as a spasific granules.
-----^ because it's contain histamin it's responsable of allergia reactian.
-----^ there is no basopania cuase the normal is : 1_5 or 0_1%

Not :
In allergic reaction tow cell work :
1-microphages which activitie Tcell .
2-B cell which calld plasma cell after activitied .
------^ Plasma cell secret antibodies.
------^ antibodies have aresptoron mast (basofilis)
-----^ aftar antibodies bind to it's receptors mast cell produce histamie and heparin which cuse the allergic reaction.

* allergy contain : hotness/ edema/ redness.
* 2type of allergy :

1- systamic: in all body .
2: local : in certien organ.