LYMPHOMA

objectives :

* introduction to lymphoid tissue .

*hodgkin lymphoma :

- presentation , diagnosis , treatment .

* nonhodgkin lymphoma :

- clinical features , diagnosis , classification treatment .

* what is lymphoid tissue :
    - structure.
    - function.
    - system.

Lymphomas

lymphoid tissue :

1- primary lymphoid tissue : lymphocytes “B-T”
bone marrow & thymus

A- B- lymphocytes maturation and activation occurs within BM , they originate from pluripotent stem cell

B- immature T- lymphocytes moves to the thymus where they maturate

2- Secondary lymphoid tissue :

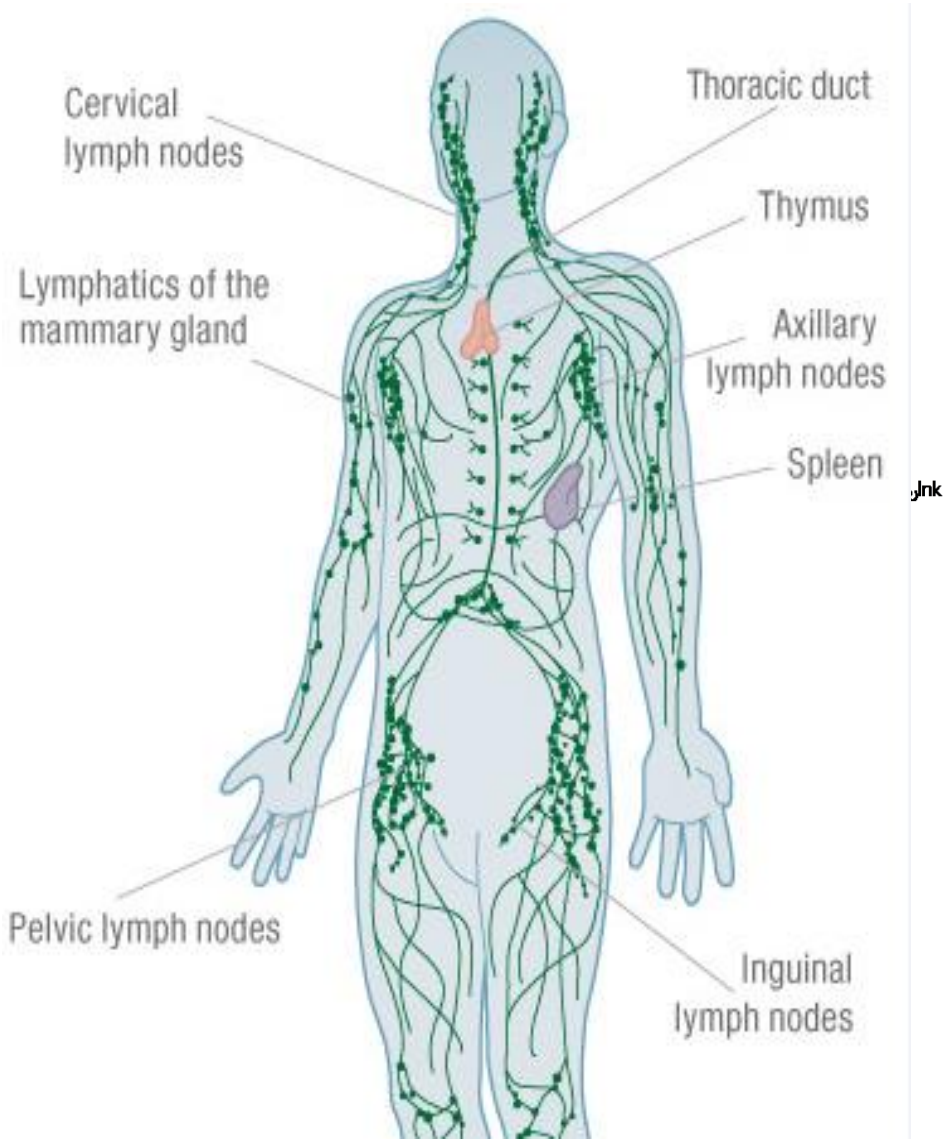
lymphoid nodes , Tonsils , Adenoids , Spleen , Payer's patches , Mucosa associated lymphoid tissue “MALT”

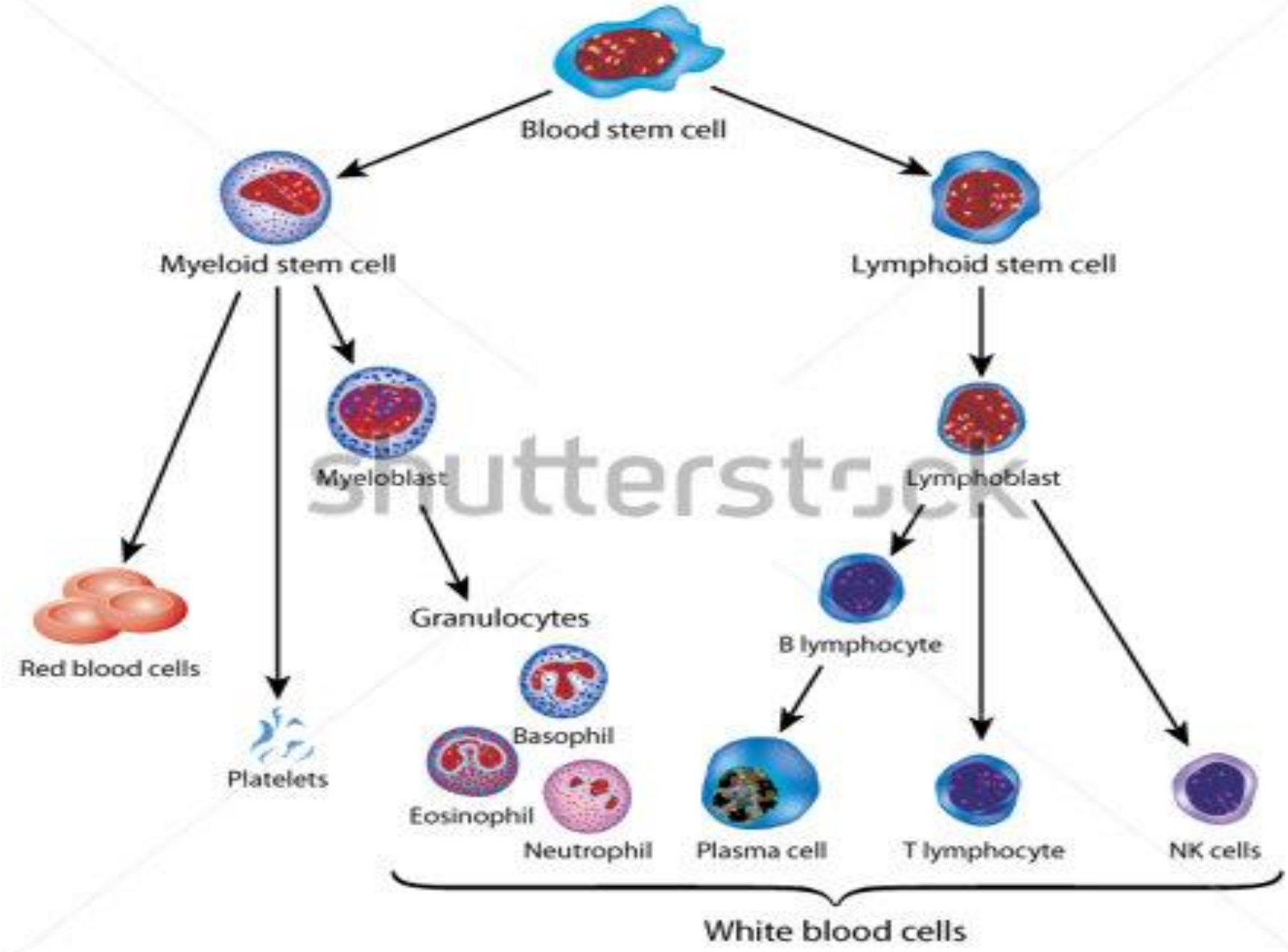
Function of lymphoid system:

- Draining interstitial fluids
- Transporting dietary lipid
- Role in immunity

Lymphatic system structure :

- lymphatic vessels
- lymph
- lymphoid tissue


Cervical
lymph nodes
Thoracic duct
Thymus
Lymphatics of the
mammary gland
Axillary
lymph nodes
Spleen
Pelvic lymph nodes
Inguinal
lymph nodes


Blood stem cell
Myeloid stem cell
Lymphoid stem cell
Myeloblast
Lymphoblast
Red blood cells
Platelets
Granulocytes
Basophil
Eosinophil
Neutrophil
B lymphocyte
Plasma cell
T lymphocyte
NK cells
White blood cells
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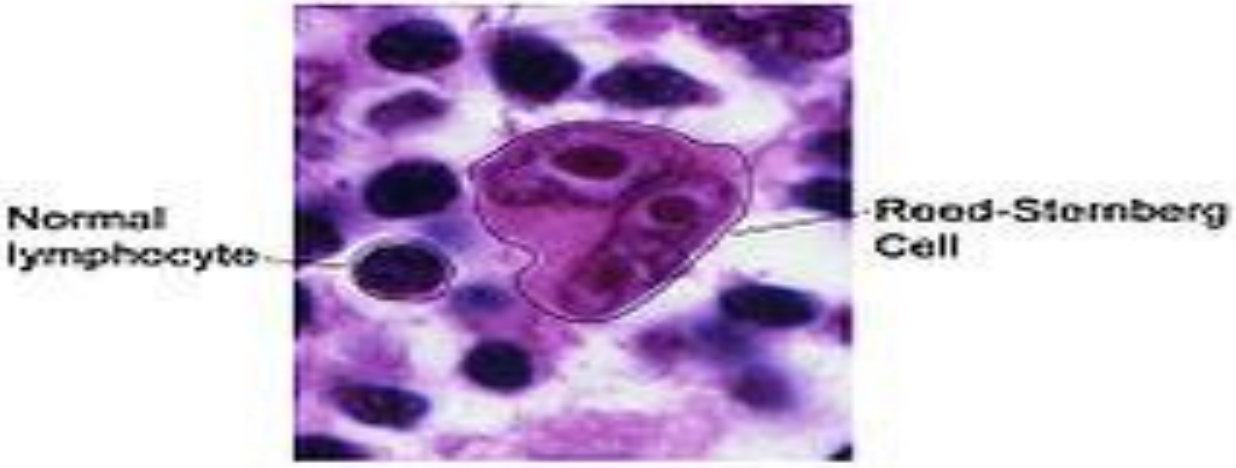
Hodgkin Lymphoma

Introduction :

Hod. Lymphoma " HL. " is a B-cell lymphoid malignancy that originate in a lymph node germinal center, the histological hall mark of HL is the Reed- Sternberg cells



Epidemiology and Aetiology of HL :

- incidence :

. constitute 1% of cancer cases \ yrs.

= 4 new cases \ 100.000 population

. Bimodal age of presentation:

major peak bet. 20-30 yrs.

minor peak bet. 50-70 yrs.

. Male excess 1.5 : 1

_ *Aetiology :*

unknown but there are risk factor which are associated with HL such as :

high socioeconomic status , increased risk of HL in individuals with a history infectious mono nucleosis , familial aggregation .

WHO classification of HL :

type	*histology*	*incidence*
- nodular lymphocyte predominate		3-8%
- classical HL	nodular sclerosis	*70%*
	mixed cellularity	*20%*
	lymphocyte – rich	*5%*
	lymphocyte - depleted	*rare*

Diagnosis :-

- histopathlogical examination of affected site :
  - # morphological finding .
  - # immunhistochemical staining.

NB: the diagnosis is confirmed& finalized by both diagnostic steps.

NLPHL : slow growing usually localized rarely fatal

CD15 -ve , CD30 +ve , CD20 +ve , CD45 +ve

Classical HL : CD15 +ve , CD30 +ve ,

CD20 -ve , CD45 -ve

NSHL : occurs in young patient , more in female , characterized by good response to ttt but higher relapse rate

MCHL : common in elderly both sixes equal affected

LRHL : common in males , good prognosis

LDHL: elderly , poor prognosis

Clinical features :-

1. painless , rubbery , lymphadenopathy may fluctuate in size " wax & wane"

2. splenomegaly ± hepatomegaly

3. SVC compression associated with mediastinal or hilar LAP

4. Pericardial & pleural effusion

5. Extra nodal presentation : lung , B.M. , bones , liver.

6. B- symptoms : weight loss , unexplained fever , drenching night sweats .

7.constitutional symptoms: pruritus .

8. Susceptibility to infection due to defective cellular immunity , TB , fungal , viral.

investigation:

- CBC &ESR , LFT , LDH .
- RFT , uric acid .
- CXR , x-ray of affected site .
- U/S abdomen& pelvis & neck .
- C.T chest & abdomen pelvis .
- MRI or bone scan or PET scan.
- Biopsy of the involved site ± Bone marrow biopsy .

Ann Arbor staging of HL :

Stage	Area of Envolement
I	Single lymph node group
II	Multiple lymph node groups on same side of diaphragm
III	Multiple lymph node groups on both sides of diaphragm
IV	Multiple extranodal sites or lymph nodes and extranodal disease
X	Bulk > 10 cm
E	Extranodal extension or single, isolated site of extranodal disease
A/B	B symptoms: weight loss > 10%, fever, drenching night sweats

Treatment :

Treatment options including

- chemotherapy
- combination chemotherapy + radiotherapy

Indication for radiotherapy :

- stage I & IIA after 3 cycles of chemotherapy
- after chemotherapy to sites of bulky disease
- to lesion causing serious pressure symptoms

Indication for chemotherapy :

- All patients with B- symptoms
- advanced stage of disease IIB , III , IV

Types of chemotherapy :

1- ABVD " Adriamycin _ Bleomycin_
Vinblastine _ decarbonize"
each cycle is formed of D1 – D15
6 _ 8 cycles

2- BEACOPP " Bleomycin _ Etoposide _ Adriamycin
cyclophosphamide_ Oncovin _
Procarbazine _ Prednisolone "
D1 _ D8 to be repeated every 21 day
6 _ 8 cycles

evaluation of response :

- physical examination & investigation after 3-4 courses of chemotherapy
- C.T or PET scan to detect any residual masses

Complete Remission "CR" : complete resolution of all radiological and laboratory evidence of active HL

Uncertain Complete Remission "CRU" : identifies the the presence of a residual mass that remains stable or regresses on follow up

prognosis :

stage IA : cure rate 90%

stage IIA : cure rate 70%

stage III & IV : cure rate 60 – 70 %

Treatment of Relapses :

- if the pt. relapsed more than 1 yr. of last chemotherapy ABVD or BEACOPP
- if relapsed less than a year
  - salvage chemotherapy
  - high dose chemotherapy followed by ASCT

THANKS