HODGKIN LYMPHOMA

HL

1. Single axial group of nodes involved (cervical, mediastinal, para-aortic)
2. Orderly spread by contiguity
3. Mesenteric Nodes & Waldeyer's ring } Not involved
4. Extranodal presentation rare
5. Bimodal age grp distribution (15-20yrs ; Elderly)

NHL

1. Multiple peripheral nodes involved
2. Noncontiguous spread
3. Involved
4. Common

Hodgkin Lymphoma :-

Defination :-

Involves single axial group of nodes

+

Spreads to anatomically contiguous lymphoid tissue

+

Morph :- Reed-Sternberg cell
(Neoplastic giant cell)

Classification :-

1.) Nodular sclerosis
2.) Mixed cellularity
3.) Lymphocyte rich
4.) Lymphocyte depletion

} CLASSICAL
(Same Immunophenotype)

5.) Nodular lymphocyte predominance } NON CLASSICAL

Reed-Sternberg cell

→ Aneuploid

→ chromosomal abbretions

↓

• copy no. gain in genes :-

(i) REL on chr-2

(ii) PD-L1 } on chr.9

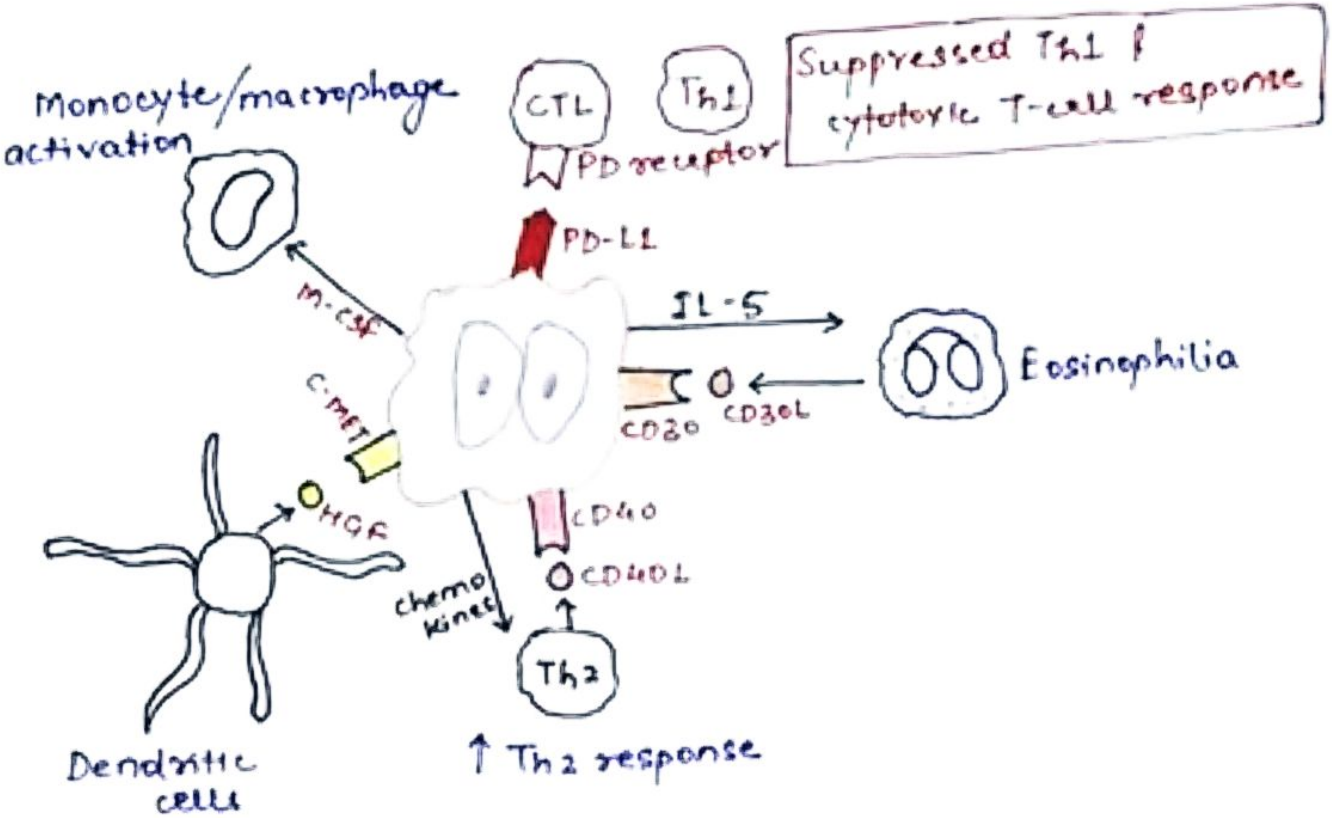
(iii) PD-L2 }

Reed-Sternberg cell

Released factors → Accumulation of reactive cells in tissues.

⊕ growth & survival

"cross-talk" b/w R-S cell & reactive cells



"CROSS-TALK" between R-S cell & Reactive cells.

RS cells & its variants :-

(i) Classic RS cell

- Large cell
- Abundant cytoplasm
- Bilobed nucleus
- Each lobe contains eosinophilic inclusion like nucleolus
- Owl-eye appearance

(ii) Mononuclear cell variant

- Single nucleus
- Inclusion like nucleolus

(iii) Lacunal variant

{ Seen in Nodular Sclerosis HL }

→ Folded/multilobate nuclei
→ Disruption of cytoplasm (During tissue sectioning)
→ Seems like nucleus sitting in an empty space (lacuna)

(iv) L & H cells
(Lymphohistocytic variant)
(Popcorn cell)

{Seen in Nodular lymphocyte predominance HL}

→ polypoid nuclei
→ Lobulated nucleus (popcorn shape)

(v) Pleomorphic/Anaplastic variant

{Seen in Lymphocyte depletion HL}

→ pleomorphic cell
→ Atypical nuclei

(vi) Mummified cell variant

→ Dark eosinophilic cytoplasm
& pyknotic nuclei

Subtypes of Hodgkin Lymphoma :-

① **Nodular sclerosis** :-
- m.c. subtype
- Lacunar variant & Diagnostic RS cell
- Background infiltrate of T-cell, eosinophil, macrophages
- Fibrous bands dividing cellular area into nodules
- CD15+, CD30+, EBV-

② **Mixed cellularity** :-
- 20-25% (males > females)
- Mononuclear variant + diagnostic RS cell
- Background infiltrate of T-cell, eosinophils, macrophages
- CD15+, CD30+, 70% EBV+

③ Lymphocyte rich :- • uncommon (males > females)
• Mononuclear variant + diagnostic RS cell
• Background rich in T-lymphocyte
• CD15+ , CD30+ , 40% EBV+

④ Lymphocyte depletion :- (Least common) (males > females) (Worst prog.)

(i) Diffuse fibrotic variant ⇒ • Diffuse fibrosis of LN [Hypocellular]
• Pleomorphic RS cell + diagnostic RS cell
• Background depleted of lymphocyte
• CD15+ , CD30+ , most EBV+

(ii) Reticular variant ⇒ • Reticular arrangement
• Pleomorphic RS cell + diagnostic RS cell
• Background depleted of lymphocyte
• CD15+ , CD30+ , most EBV+

⑤ Nodular Lymphocyte predominance :- (males > females)

- Uncommon (Best prognosis)
- L&H variant + diagnostic RS cell
- Background rich in - reactive B cell
  - follicular dendritic cell
- Nodular pattern of growth
- CD15 - , CD30 - , EBV$^{\ominus}$ -
- CD20 +