Chapter 20: The Lymphatic System

Functions: return of interstitial fluid to blood; transport of lipids from GIT to blood; defense.

I. Lymphatic Vessels

Carry lymph, one way flow from lymph capillaries, towards head.

Permeability due to overlapping endothelial cells, anchored by collagen.

Lacteals near small intestine.

Collecting vessels, similar to veins → Lymphatic trunks → Right lymphatic and Thoracic Ducts → Subclavian Veins.

Lymph movement by same mechanisms as venous return.

Malfunction leads to lymphedema.

Elephantiasis = obstruction due to parasites.

II. Lymphoid Cells & Tissues

Lymphocytes are T and B Cells, macrophages, dendritic and reticular cells.

These cells within lymphatic tissue, a good “vantage point”.

Contain reticular CT.

Diffuse lymphatic tissue scattered everywhere, especially mucous membranes.

Nodules are small clusters of lymphoid cells and tissue, may be transient.

Peyer’s Patches in intestine.
III. Lymph Nodes

Largest concentration in inguinal, axillary, cervical regions.

Filter lymph.

Capsule forms compartments.

Stroma of reticular fibers.

Cortex with germinal centers; medulla with cords of T & B Cells.

Macrophages in sinuses.

Afferent and (fewer) efferent vessels.

Slows lymph flow.

Inflamed when overwhelmed.

IV. Other Lymphoid Organs

(A) Spleen

also filters blood, removes old RBCs, stores platelets.

White and red pulp.

Thin capsule offers poor protection against trauma.

(B) Thymus: superior to heart.

T Cell development. Atrophies after puberty.

(C) Tonsils:

Palatine; lingual; pharyngeal (adenoids).

Crypts trap bacteria.

(D) Aggregates of Follicles:

Peyer’s Patches, in appendix.

MALT = mucosa- associated lymphoid tissue,
In GIT and respiratory tract.