

Unit 28:

Thorax - topographic anatomy of thoracic cavity, organs and their supply

GENERAL OBJECTIVES:

- general considerations of the organization of thoracic cavity and differences in topographic characteristics of thoracic walls and cavity
- division of thoracic cavity: pleural spaces and mediastinum
- organization and division of mediastinum

SPECIFIC OBJECTIVES:

1. Thoracic cavity

Arrangement of Thoracic Viscera

Cardiovascular System

Heart

Respiratory System

Trachea

Bronchi

Lungs

Alimentary Tract

Oesophagus

Lymphoid System

(Thymus)

Pleural Sacs

Pleura

Parietal - Costal, Diaphragmatic, Mediastinal, Cupola(Cervical)

Lines of Pleural Reflection (from Costal Pleura)

Connecting Root (-> Pulmonary Ligament)

Visceral

Vessels of Pleurae

Nerves of Pleurae

Pleural Cavities

Recesses (Costodiaphragmatic & Costomediastinal)

Lungs

Position (Paired Viscera)

Lobes & Fissures

Apex, Base, Borders & Surfaces (Costal, Medial)

Grooves on Mediastinal part of Medial Surface

Root (Hilus)

Contents (Bronchi, Vessels, Lymph Nodes & Nerves)

Bronchial Tree: Primary, Secondary & Tertiary Bronchi

Bronchopulmonary segments

Arteries & Veins: Pulmonary

Bronchial
Lymphatics & Lymph Nodes
Nerves: Motor (Sympathetic, Parasympathetic), Sensory

Mediastinum

Anterior Mediastinum
Thymus (in early life)

Middle Mediastinum

Pericardial Sac

Structures Entering Roots of Lungs

Principal Bronchus (right, left)
Pulmonary Artery (right, left)
Pulmonary Veins (right, left)

Posterior Mediastinum

Descending (Thoracic) Aorta
Thoracic Duct
Azygous Vein
Oesophagus

Superior Mediastinum

Thymus
Arteries

Arch of Aorta

Ligamentum Arteriosum

Branches of Arch:

Brachiocephalic Trunk
Left Common Carotid Artery
Left Subclavian Artery

Veins

Brachiocephalic Veins (right & left)
Superior Vena Cava
Azygous Vein (termination)

Thoracic Duct

Nerves

Vagus nerves (right & left)
Left Recurrent Laryngeal Nerve
Phrenic Nerves (right & left)

Trachea

Beginning (in Neck), Course, End (Bifurcation)
Key Relations of Thoracic Part
Structure: Cartilage “Rings”, Carina

Esophagus

Beginning (in Neck), Course, End (In Abdomen)
Key Relations of Thoracic Part
Sphincters & “Constrictions”

2. Thorax - Vessels & Nerves

Pulmonary Circulation

Pulmonary Trunk, Right & Left Pulmonary Arteries

Pulmonary Veins

Systemic Circulation

Arteries: Aorta (Ascending, Arch, Thoracic)

Course/Beginning & End, Key Relations, Distribution

“Special” Branches:

Ascending -> *Right & Left Coronary Arteries*

Arch -> *Brachiocephalic Trunk, L Common Carotid, L. Subclavian*

Thoracic -> *Parietal Branches: Post. Intercostal Arteries*

-> *Visceral Branches: (Bronchial, Esophageal, Pericardial)*

Variations of:(Coronary Arteries, Branches of Arch)

Veins:

of Heart:

Coronary Sinus

Tributaries & Other Veins

of Thorax:

(-> to Superior Vena Cava)

Brachiocephalic (Right & Left), Superior Vena Cava,

Azygos

Course/Beginning & End, Key Relations, Field of Drainage

“Special” Tributaries:

Brachiocephalic - Internal Thoracic Veins

(Left) Inferior Thyroid

(Left) Left Superior Intercostal

Azygos - Hemiazygos & Accessory Hemiazygos Veins

Communications (of Vertebral Venous system with Azygos System)