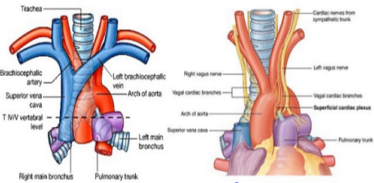


Contents of superior Mediastinum

- 1- Arch of Aorta and its branches
- 2- Brachiocephalic veins and superior vena cava
- 3- Thoracic duct
- 4- Thymus
- 5- Phrenic and vagus nerves
- 6- Trachea
- 7- Oesophagus

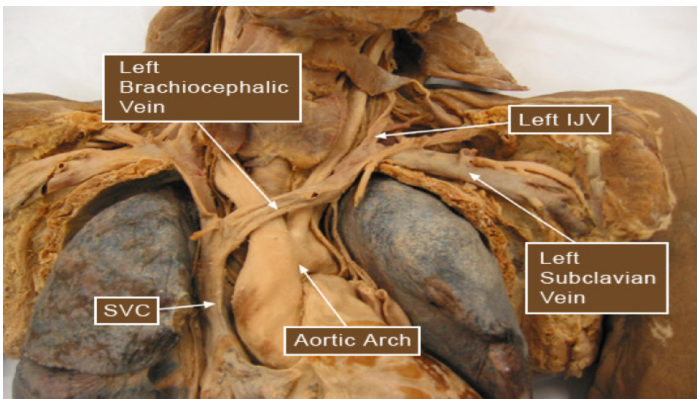
Superior Mediastinum - contents



Q from Dr. i arrange the living structures from post to Anter
 Ans: esophagus, trachea, artery, vein

ANATOMY 2

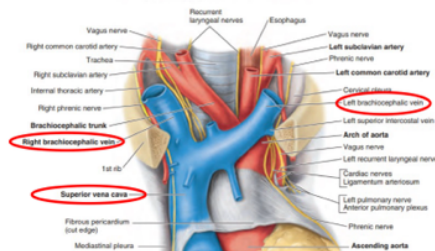
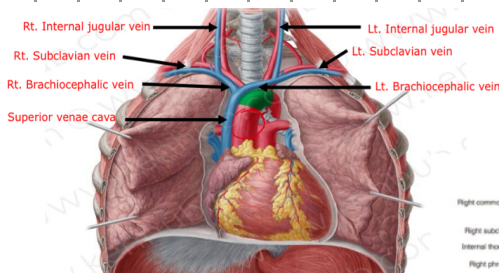
Brachiocephalic vein (right and left)



- Formation : By union internal jugular and subclavian veins .
- Beginning : Posterior to the sternoclavicular joint .
- Termination : 1st right costal cartilage.
- Both right and left Brachiocephalic veins joined together to form superior venae cava.

N.B : The left Brachiocephalic vein is longer than the right

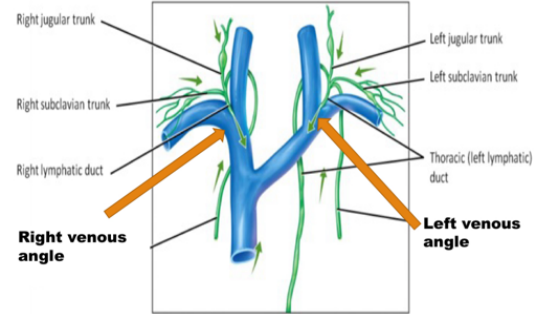
Brachiocephalic vein WHY ?? passes from the left to the right side Anterior to the roots of the 3 major branches of the arch of the aorta.



Tributaries of Brachiocephalic vein

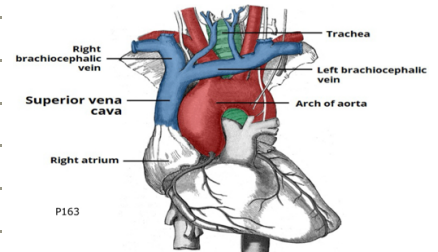
Rt. Brachiocephalic vein	Lt. Brachiocephalic vein
Inferior thyroid vein	Inferior thyroid vein
Right vertebral vein	Left vertebral vein
Right Internal thoracic vein	Left Internal thoracic vein
Right first posterior intercostal	Left first posterior intercostal vein
	Left superior intercostal vein

Superior venae cava



- Formation : By union the right and left Brachiocephalic veins.
- Beginning : 1st right costal cartilage.
- Termination : 3rd right costal cartilage as it enters the right atrium of the heart.

* it receive the venous return from the upper half of the body, above the diaphragm.

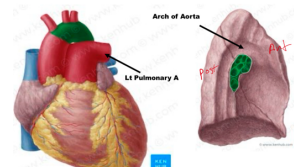


Arteries of the superior mediastinum

- Beginning : Right border of sternum at 2nd right costal cartilage
- Termination: Lower border 4th thoracic vertebra by becoming the thoracic (descending) aorta
- Course: It arches superiorly, posteriorly and to the left, and then inferiorly.. The arch ascends anterior to the right pulmonary artery and the bifurcation of the trachea. It passes over the root of the left lung to become at the left side of the trachea and esophagus

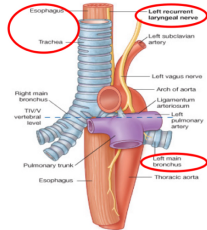
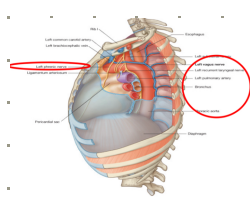
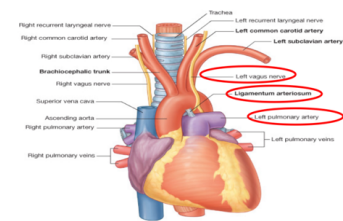
N.B. The ligamentum arteriosum :

it is the remnant of the fetal ductus arteriosus. It passes from the root of the left pulmonary artery to the inferior surface of the arch of the aorta

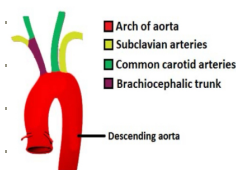


Relations

Anti and to left: left phrenic, left veins, left sup intercostal vein.
 Post and to right: Esophagus, trachea, left recurrent laryngeal nerve, thoracic duct
 inf: Bifurcation of pulmonary trunk.
 Ligamentum arteriosum.
 Superficial cardiac plexus.
 Left recurrent laryngeal nerve.
 Left main bronchus.



Aortic arch branches. (3 branches)



* arises post to manubrium where it is Anti to trachea and post to left brachiocephalic vein.
 * At right sternoclavicular (sc) joint it divide to: right common carotid, right subclavian arteries.

* arises post to manubrium enters the neck by passing post to the left sc joint.

* arises from post part of the arch behind left common carotid A.
 * leaves the thorax and enters the root of neck by passing post to left sc joint.

Nerves of the sup mediastinum

1. Vagus Nerve

Right vagus nerve

- * Passes on the right side of the trachea, then posterior to the right brachiocephalic vein, SVC
- It contributes to Rt. pulmonary, esophageal and cardiac plexuses.
- It gives right recurrent laryngeal nerve, which hooks around the right subclavian artery and ascends between the trachea and esophagus to supply the larynx.

Left vagus nerve

- * It enters the mediastinum between the left common carotid artery and left subclavian artery.
- It gives left recurrent laryngeal nerve which hooks around the arch of the aorta, lateral to the ligamentum arteriosum, and ascends in the groove between the trachea and the esophagus to supply the larynx

* Both vagi are passing behind the root of lung.

2. The phrenic nerve:

motor and sensory nerve supply for the diaphragm and sensory to the pericardium and mediastinal pleura.

Right

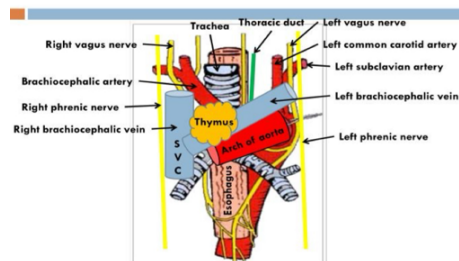
Left

passes along the right side of the right brachiocephalic vein, SVC, and the pericardium over the right atrium and descends on the right side of the IVC to passes through caval opening of the diaphragm.

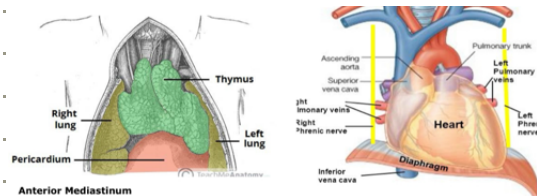
It crosses the left vagus, then, it runs along the fibrous pericardium, the left atrium and ventricle of the heart. It pierces the diaphragm to the left of the pericardium

* Both are passing Anti to the root of lungs

CONTENTS OF SUPERIOR MEDIASTINUM



Anterior Mediastinum: lies btw pericardium + sternum



- Contents:
1. Sup + inf. Sterno-pericardial ligaments.
 2. Mediastinal branch of internal thoracic A.
 3. Remains of thymus gland.
 4. Lymph nodes.

A 62 years old male patient has diagnosed as lung cancer. He is a heavy smoker, diabetic, and hypertensive. During a chemotherapy session for lung cancer, he complained of dyspnea for a week, and the doctor noticed edema in the face and arms. The doctor asked him to raise his hands above the head, and he noticed increased the edema.

What is your provisional diagnosis??

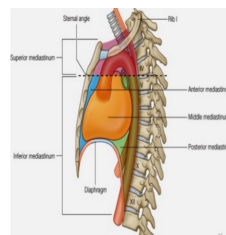


posterior mediastinum

Anti: pericardium & heart.

Posti: Lower 8 thoracic vertebrae (T3-T12).

Lat: Mediastinal pleura on each side.



- Contents:
1. Descending thoracic aorta (Artery)
 2. Azygos vein (vein)
 3. sup + inf hemiazygos veins (vein)
 4. thoracic duct (lymph)
 5. post mediastinal lymph nodes (lymph)
 6. Right + left vagi (nerve)
 7. Esophagus (tube)

Descending thoracic aorta =

Beginning → T₄

Course → esophagus descends on the right side of aorta; cross in front of it at level T₇

Termination → T₁₂

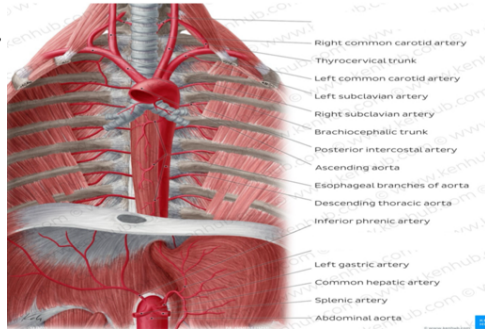
Branches:

> Parietal branches:

1. Posterior intercostal arteries from 3-11.
2. Subcostal artery.
3. Superior phrenic artery.

> Visceral branches:

1. Bronchial arteries.
2. Esophageal branches.
3. Pericardial branches.
4. Mediastinal branches.



ANATOMY 3