

Aortic Arches

Introduction to primitive cardiovascular system

1. Primitive heart
2. Primitive Vessels

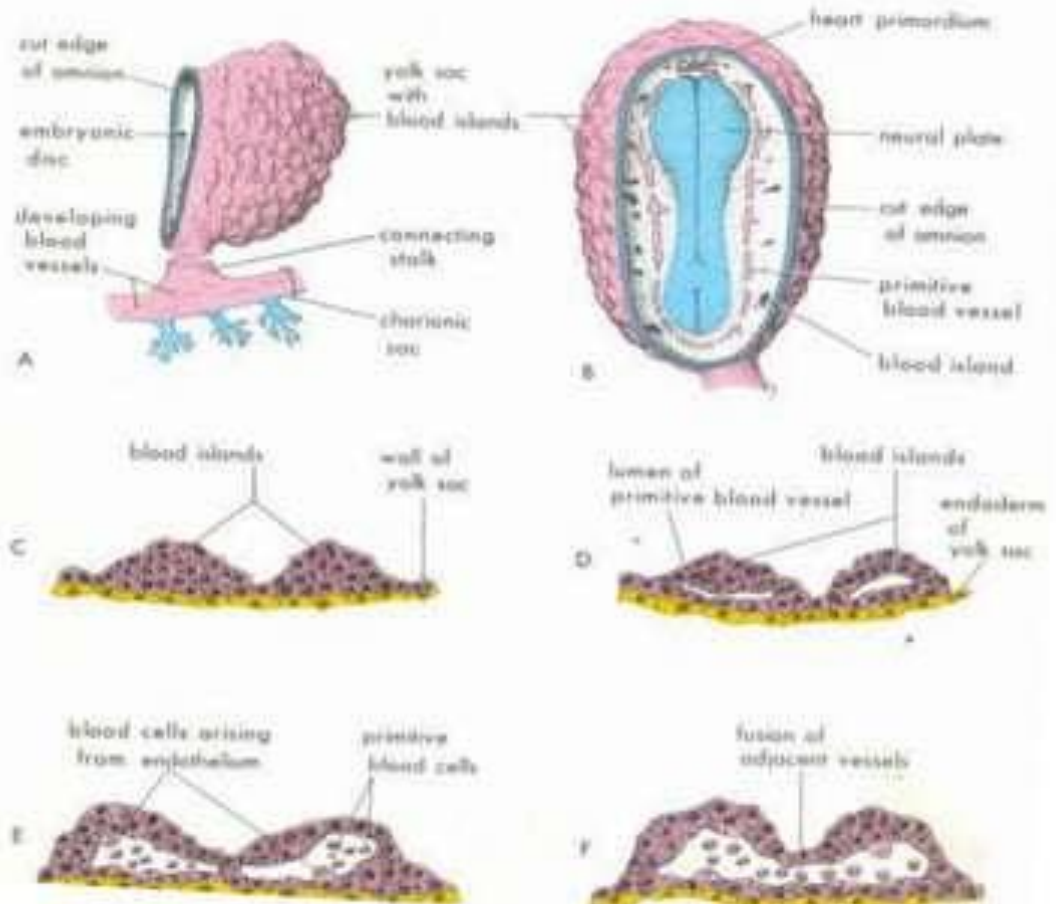
Aortic Arches

1. Introduction
2. Definition
3. Origin
4. Transformation into adult pattern
5. Derivatives of aortic Arches
6. Course of recurrent laryngeal nerve
7. Anamolies of aortic Arches

Introduction to primitive cardiovascular system

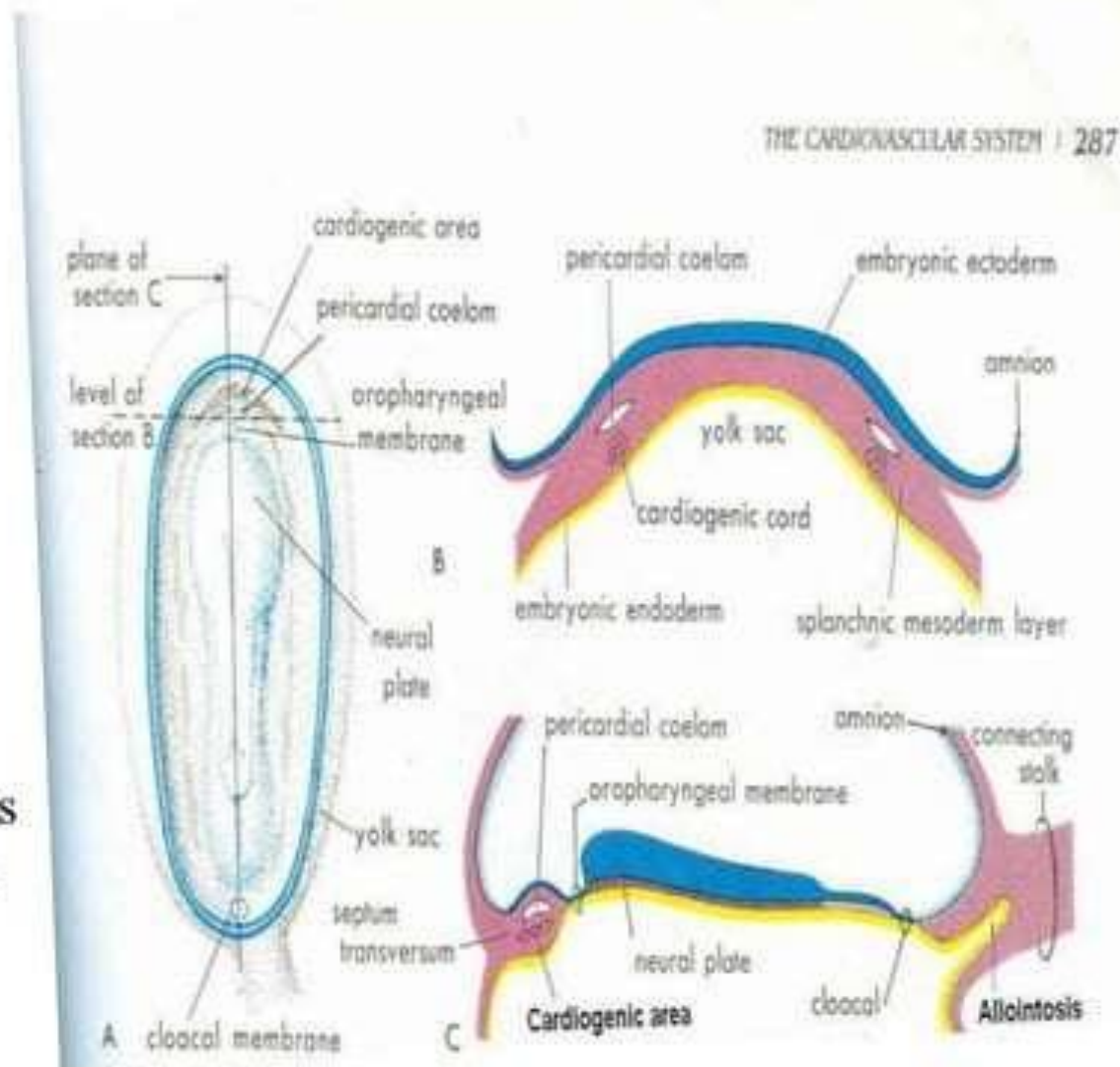
1. Angiogenesis

- Stages
- ✓ Blood Islands formation
- ✓ Appearance of cavities
- ✓ Primitive endothelium
- ✓ Primitive endothelia channels
- ✓ Fusion of the vessel

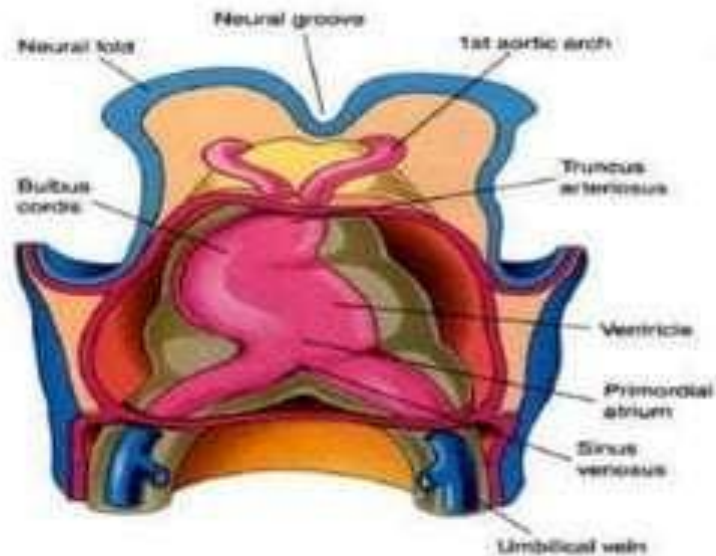
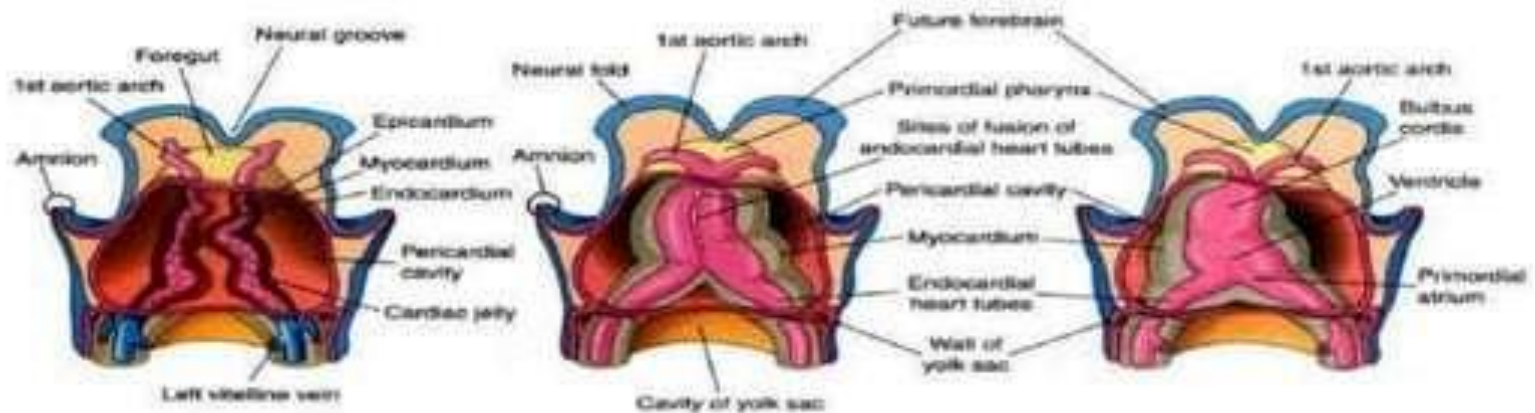


Primitive heart

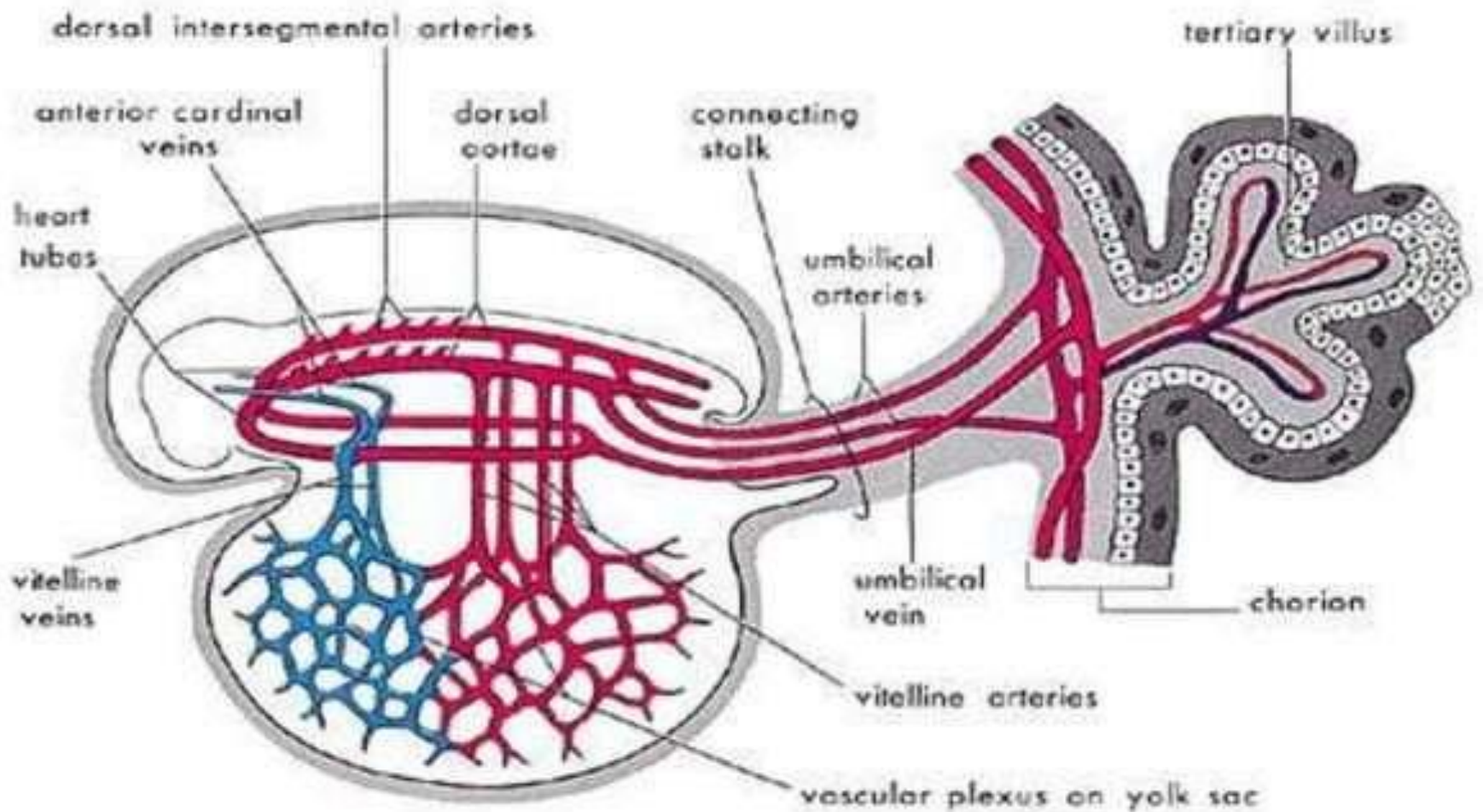
- ✓ Time
- ✓ Site
- **Stages :**
- ✓ Paired endothelial cords
- ✓ Canalisation
- ✓ Paired longitudinal tubes
- ✓ Heart tubes
- ✓ Fusion of heart tubes
- ✓ Single tubular heart



Primitive Heart



Primitive CVS



Aortic Arches

Introduction: Formation of primitive aortae

Definition:

Origin:

Transformation into adult arterial system:

Aortic Arches at 6th week of IUL

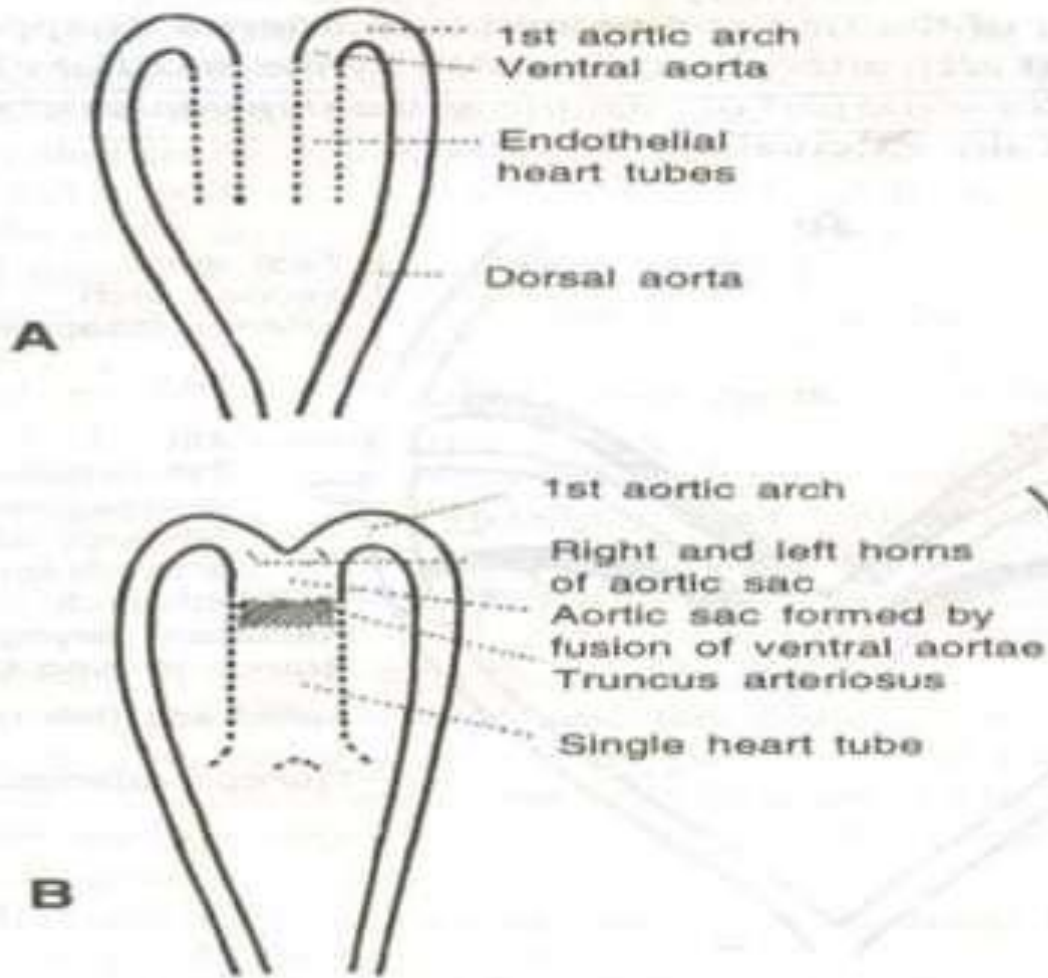
Aortic Arches at 7th week of IUL

Arterial arrangement at 8th week

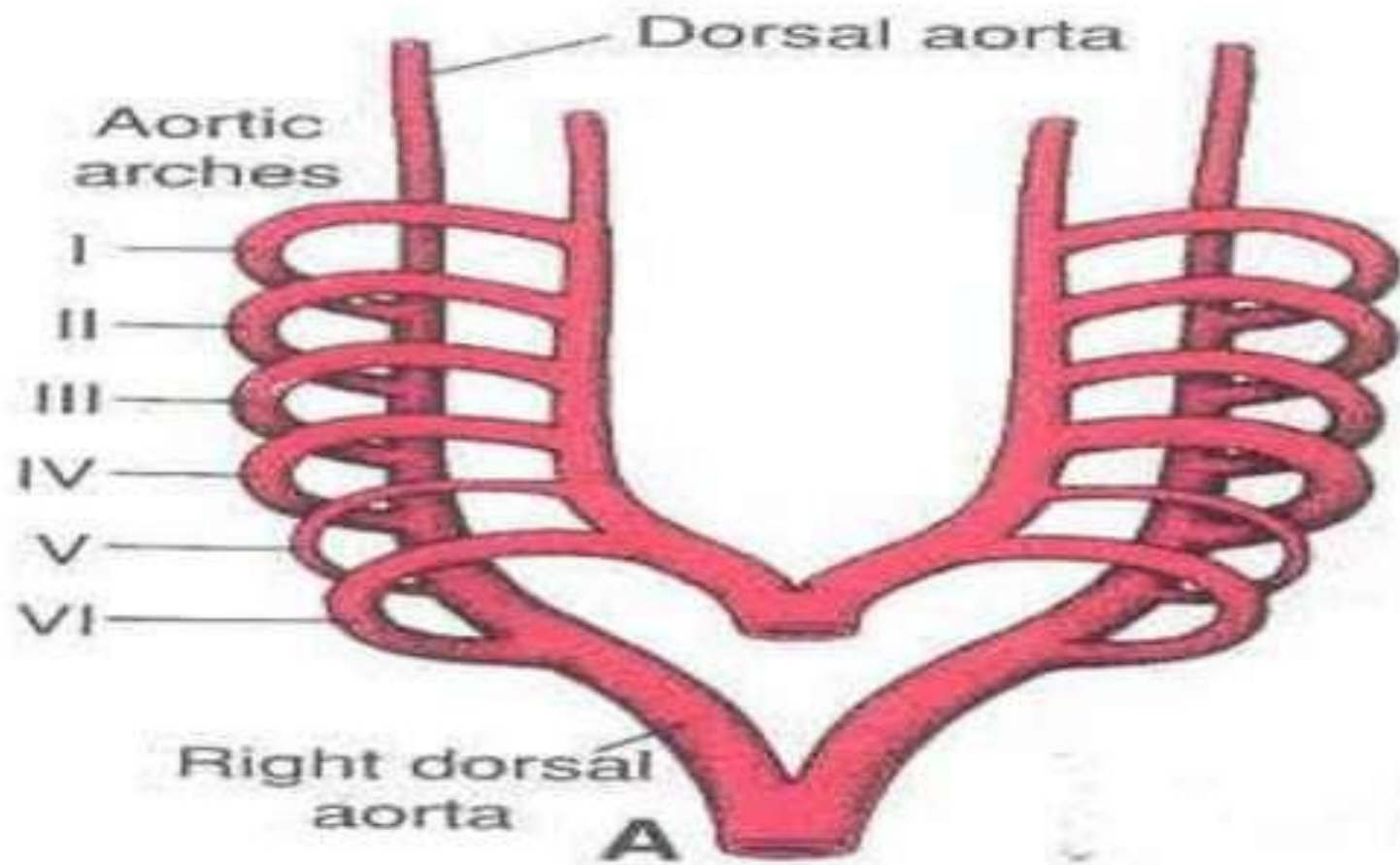
Arterial arrangement in 6 months old infants

Formation of primitive aortae

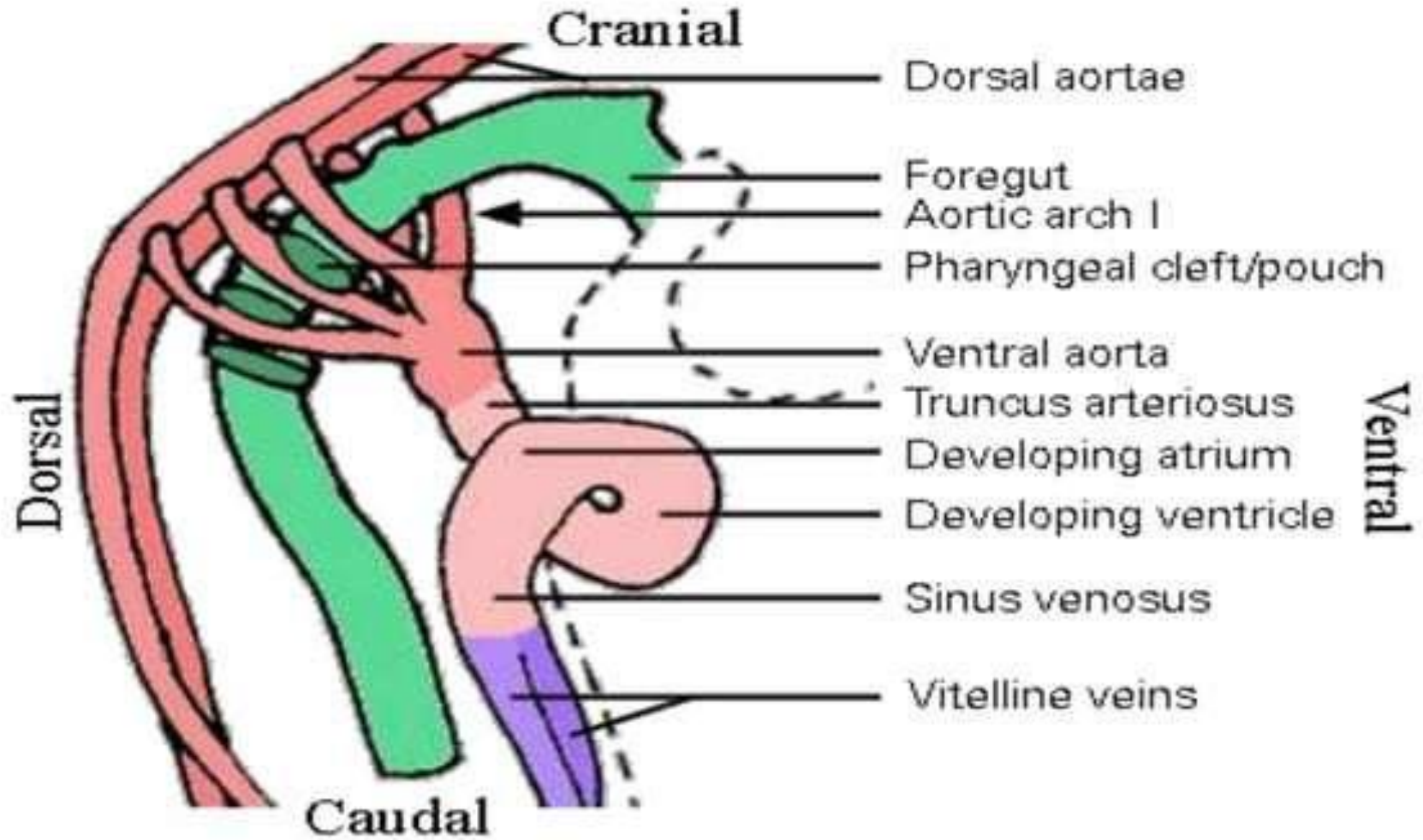
Cardiovascular



Definition

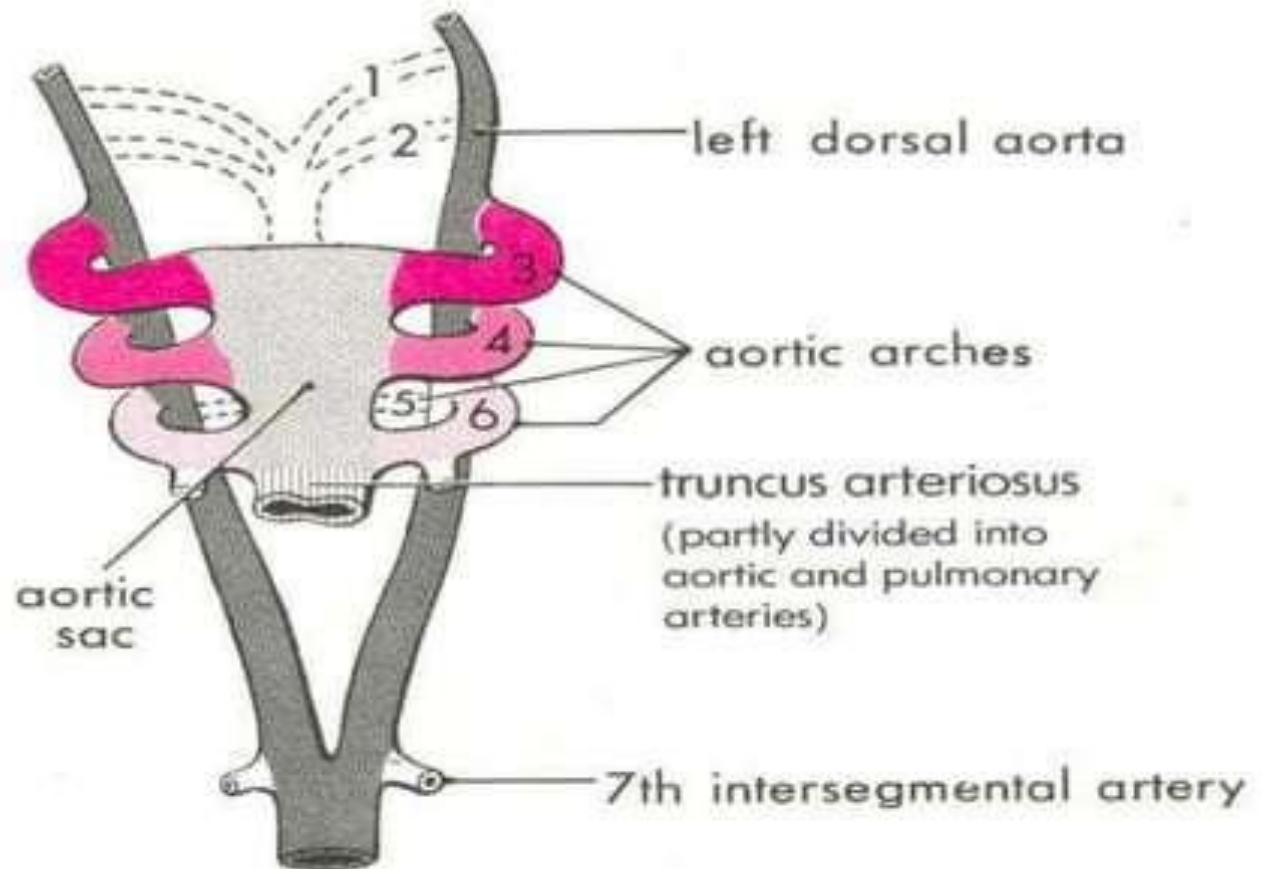


Origin

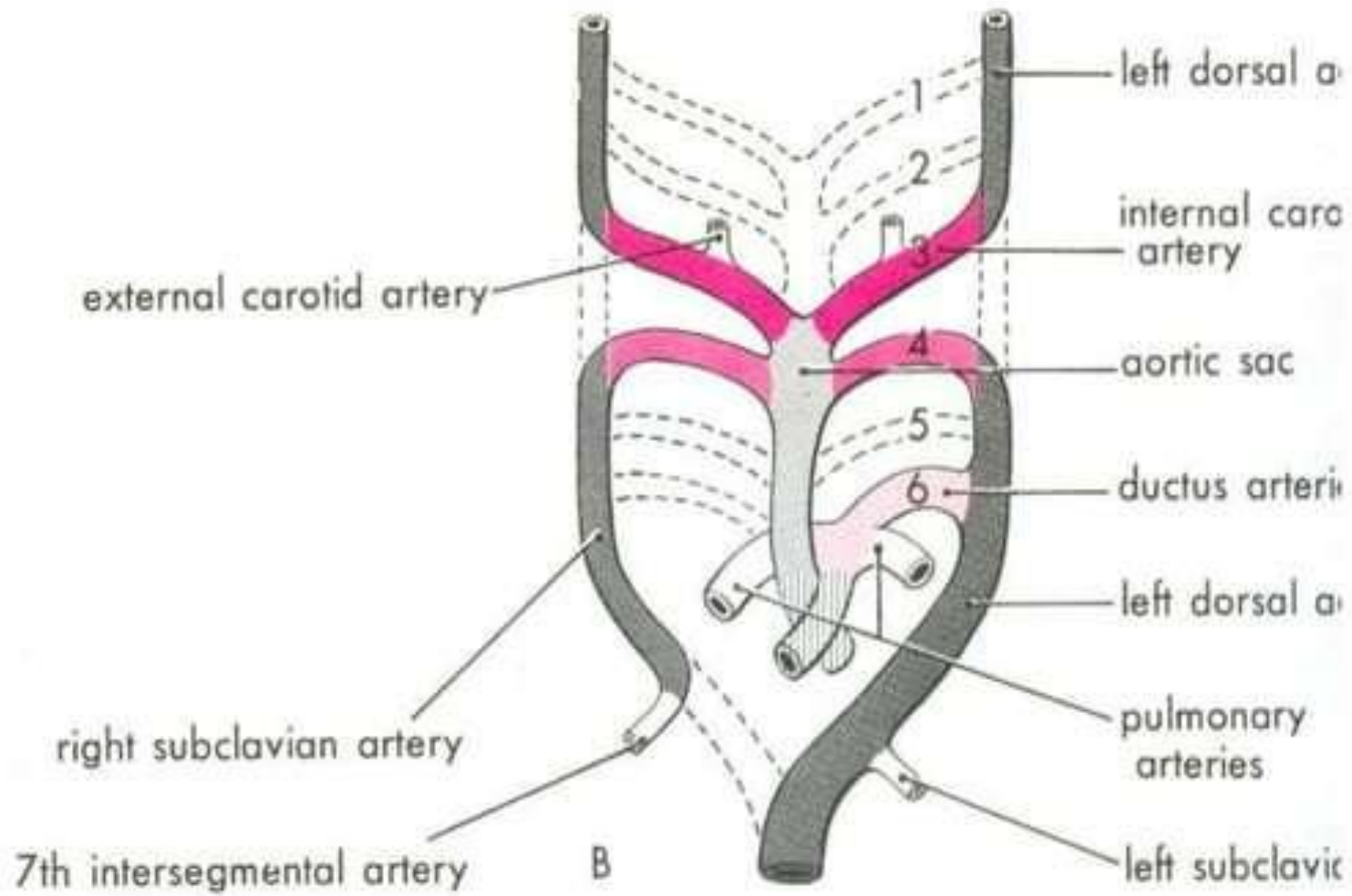


Transformation into adult arterial system

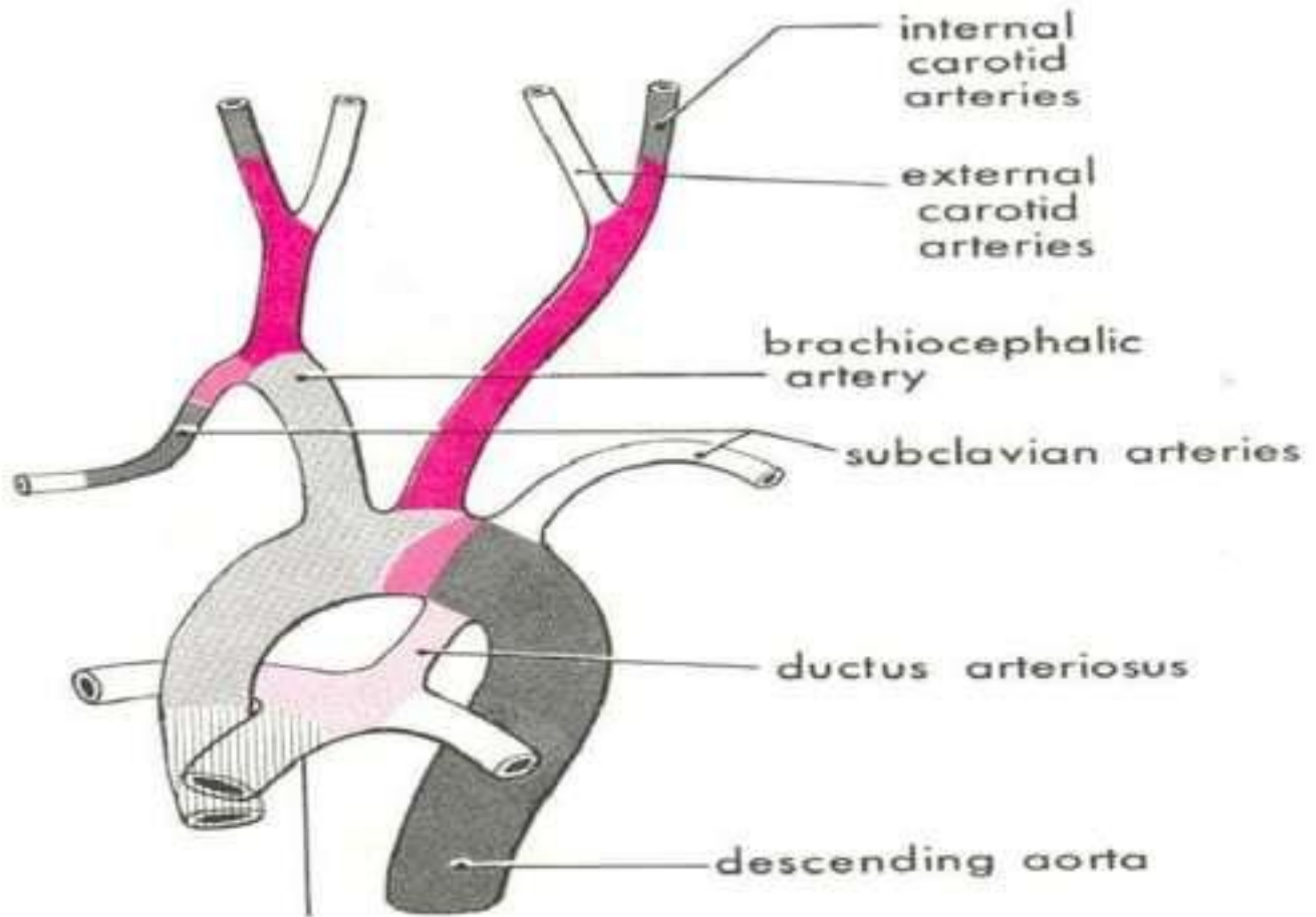
Aortic Arches at 6th week of IUL



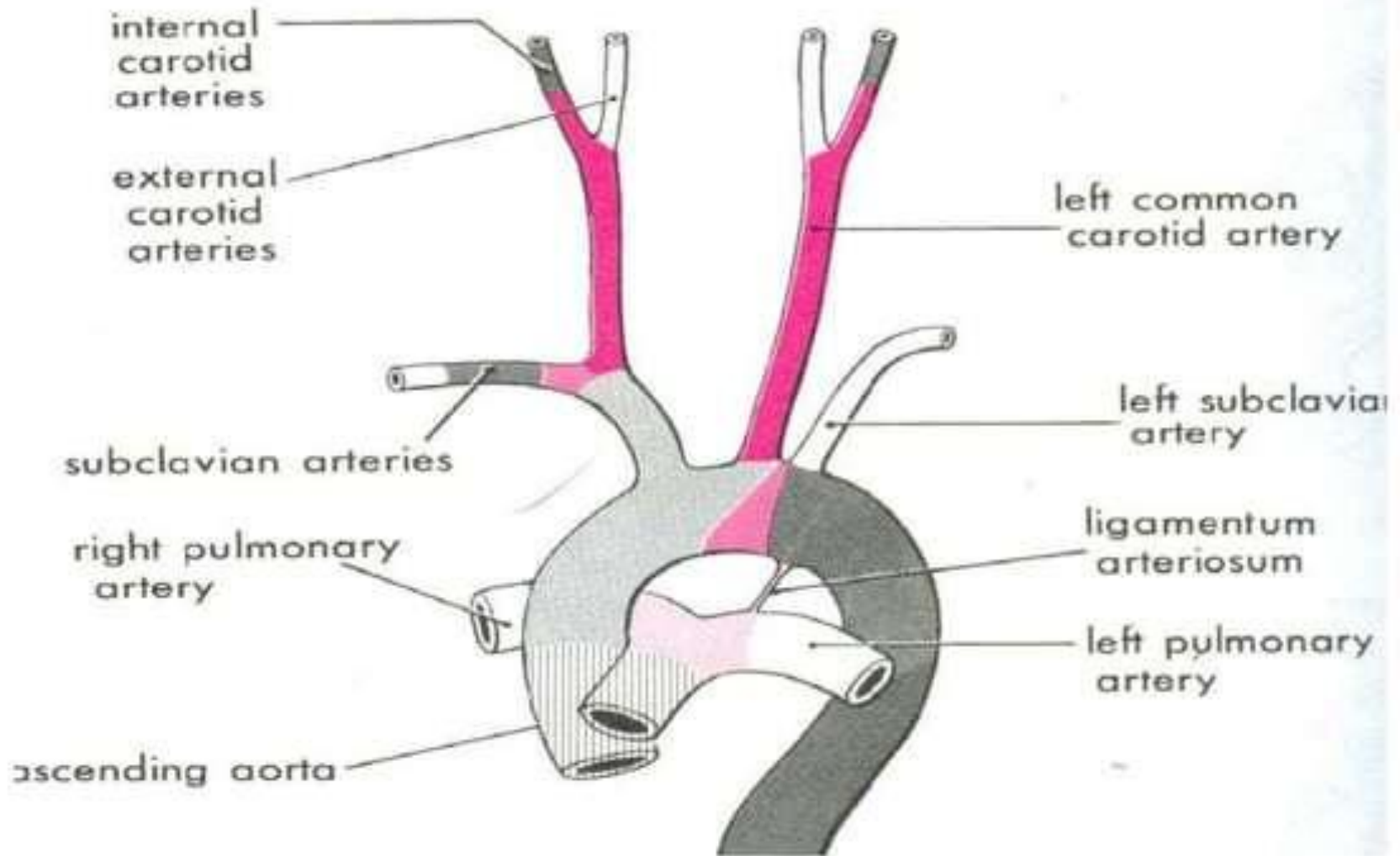
Aortic Arches at 7th week of IUL



Arterial arrangement at 8th week

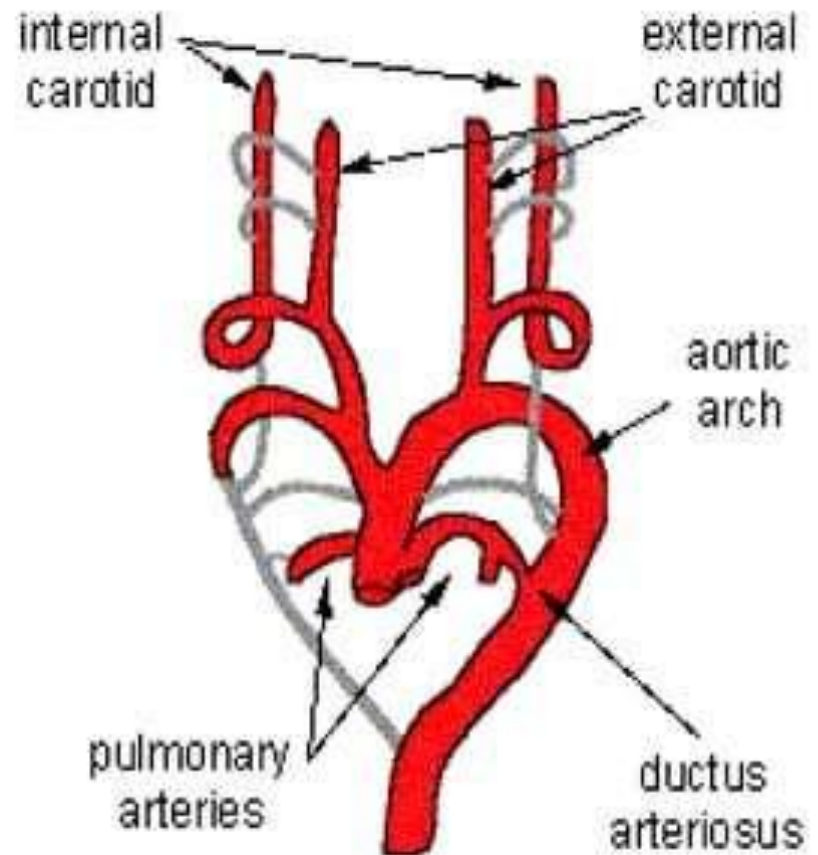


Arterial arrangement in 6 months old infants

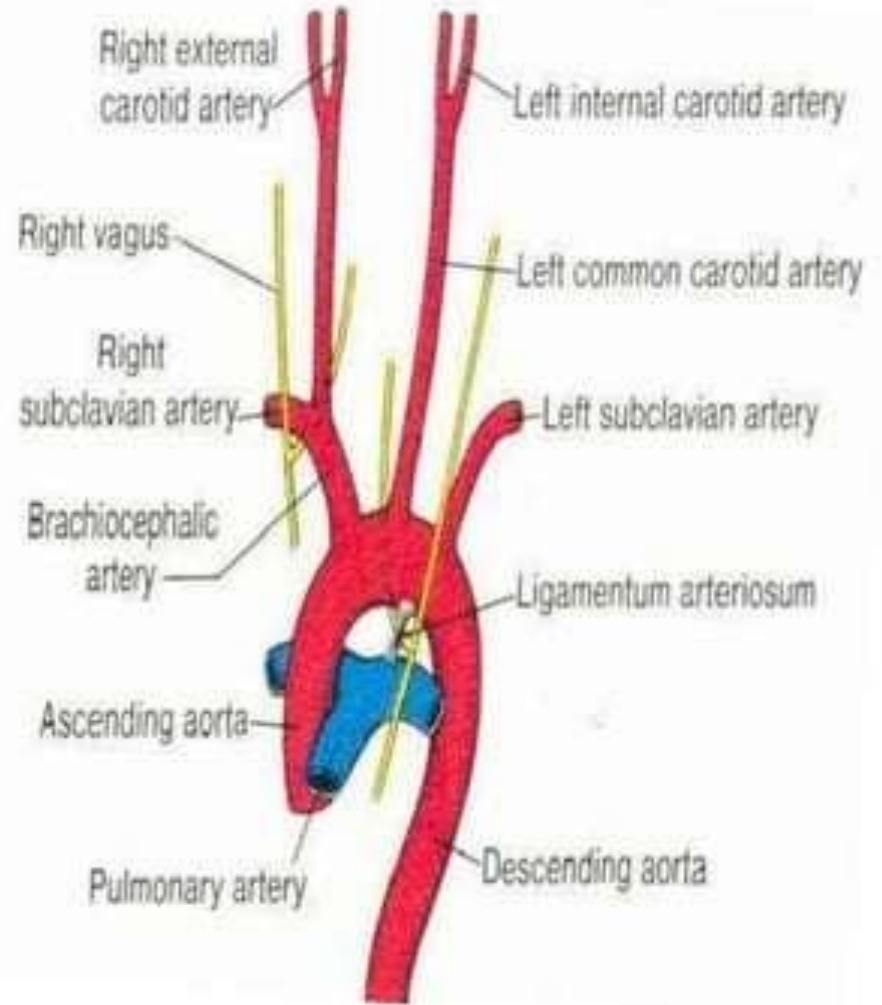
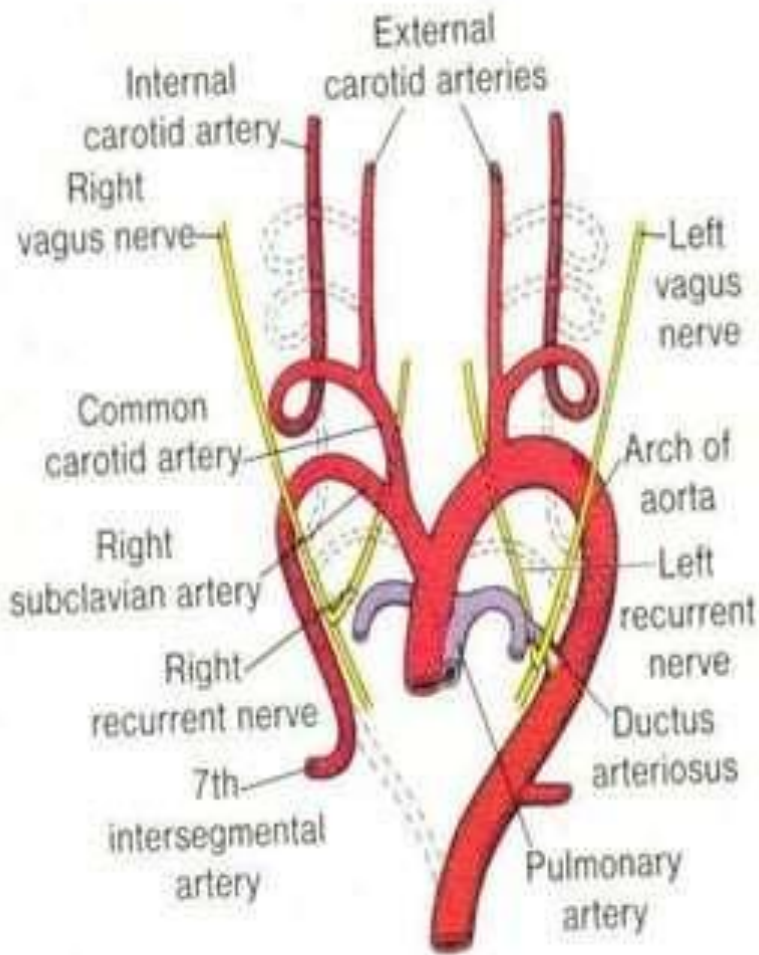


Derivatives of Aortic Arches

- ✓ 1st Aortic Arch
- ✓ 2nd Aortic Arch
- ✓ 3rd Aortic Arch
- ✓ 4th Aortic Arch
- ✓ 5th Aortic Arch
- ✓ 6th Aortic Arch
- ✓ Dorsal aorta changes

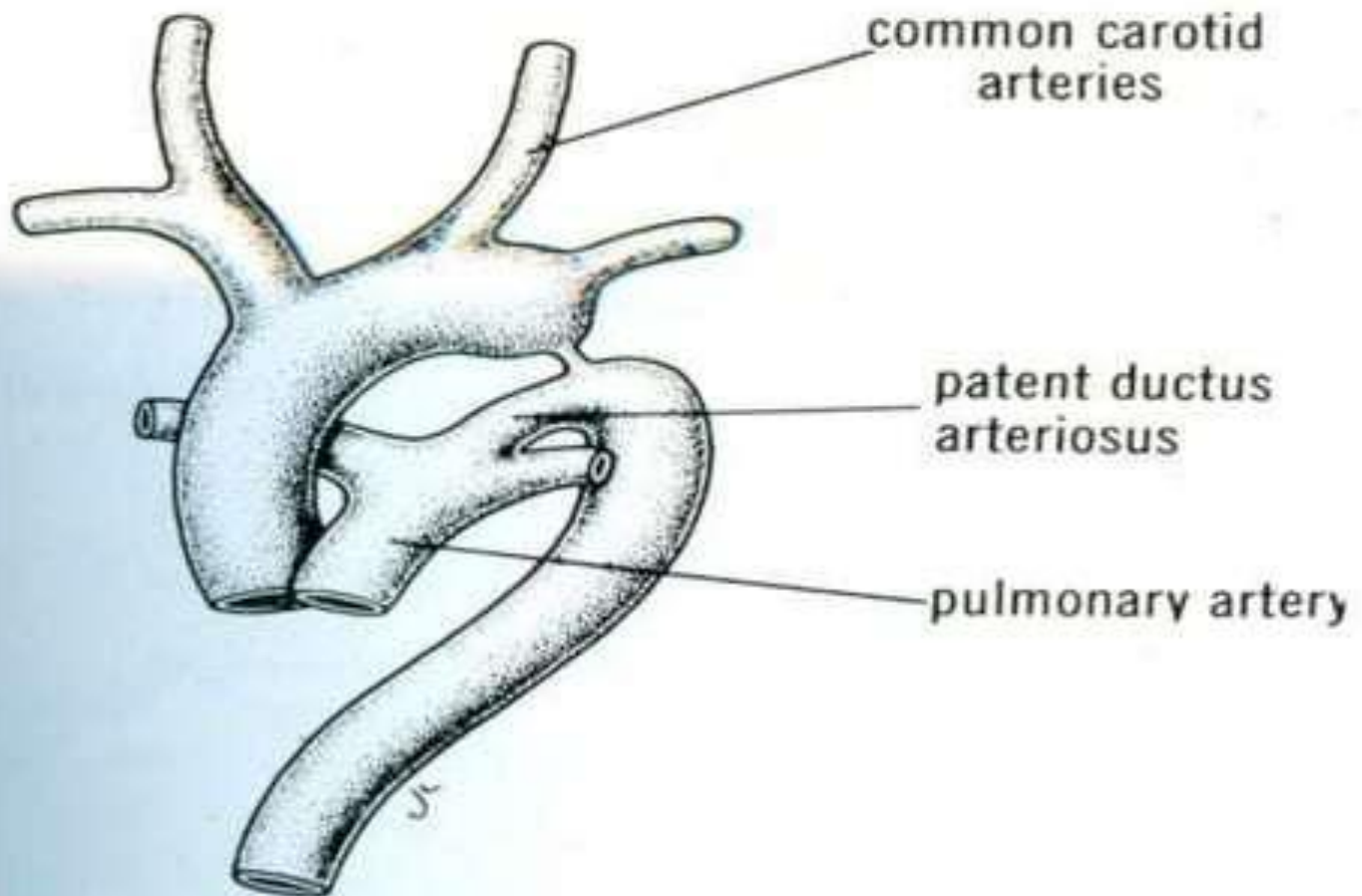


Course of recurrent laryngeal nerve



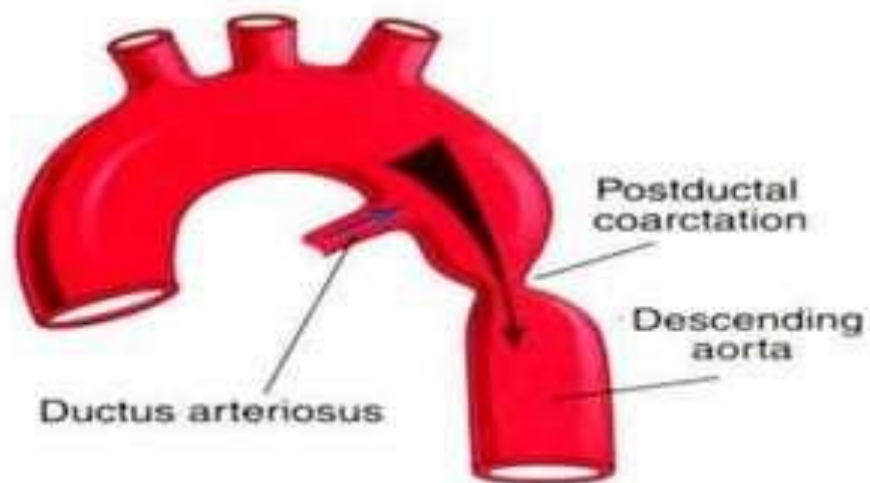
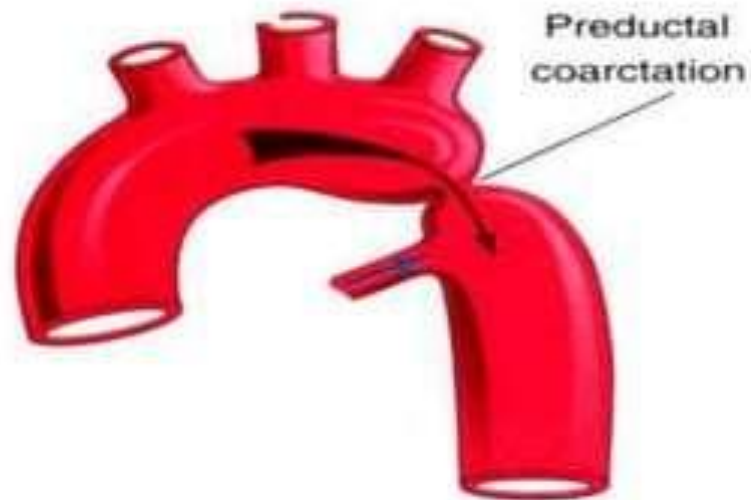
Anomalies of Aortic Arches

Patent ductus arteriosus

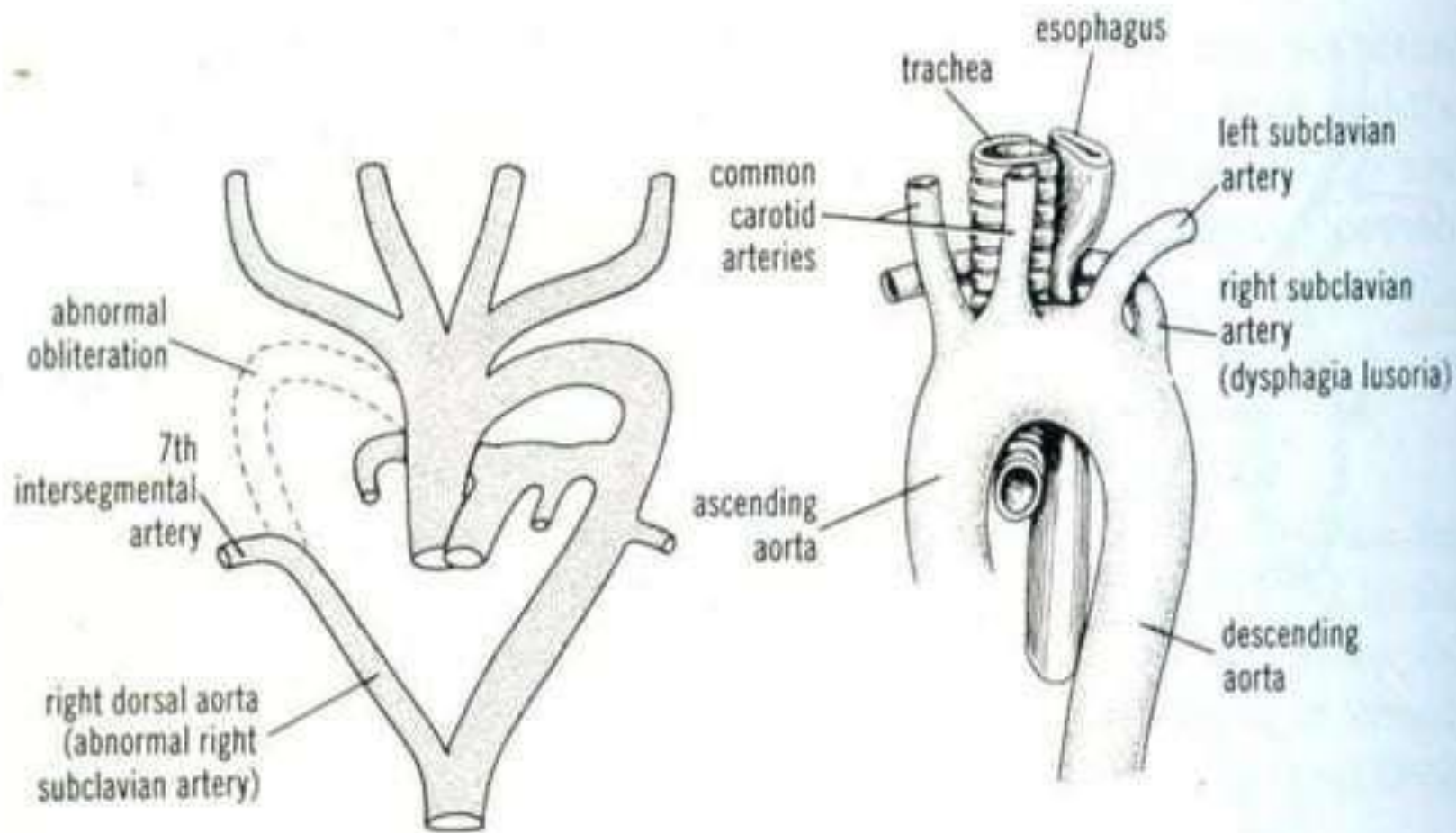


Coarctation of aorta

Types

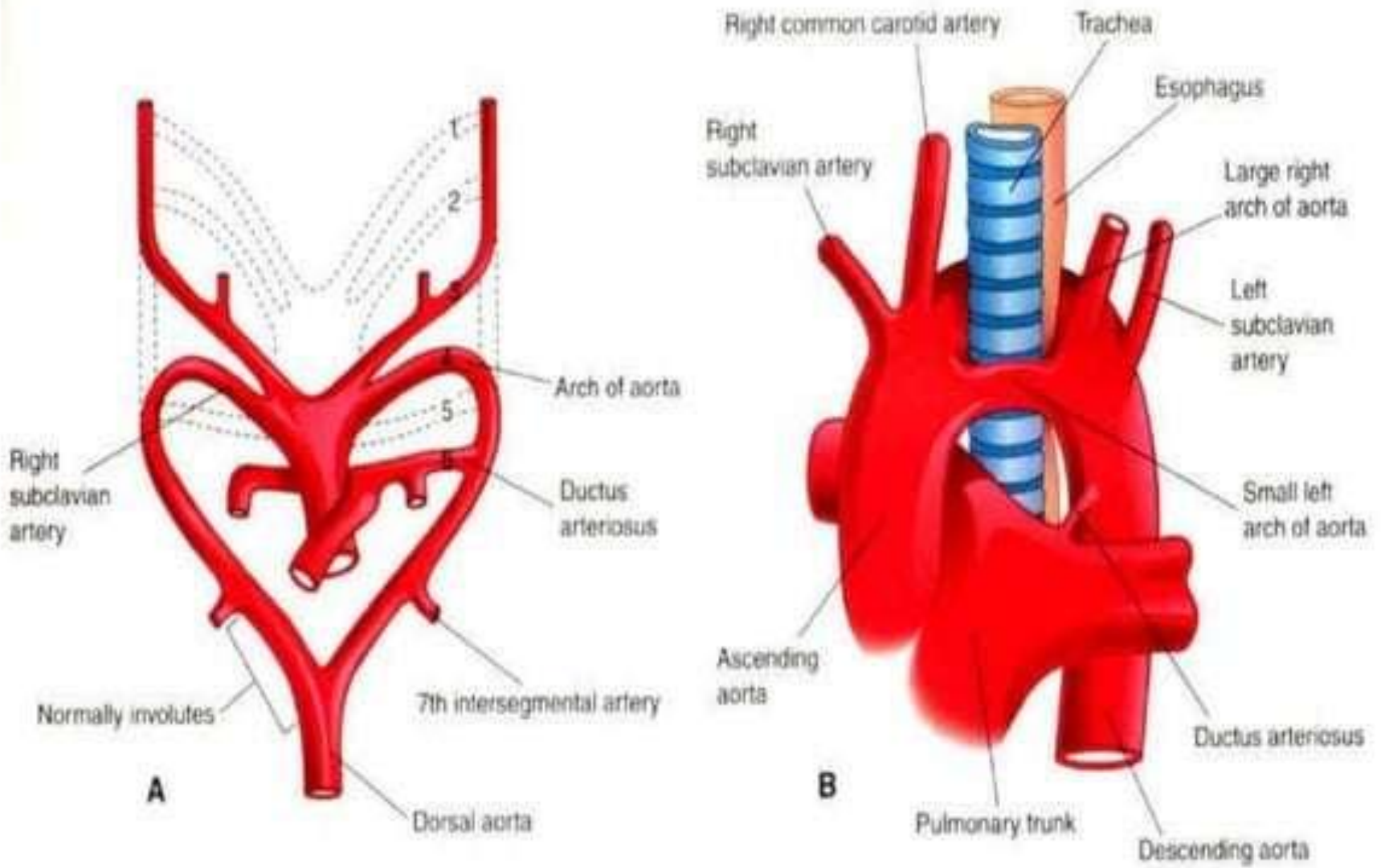


Abnormal origin of right subclavian artery: Types

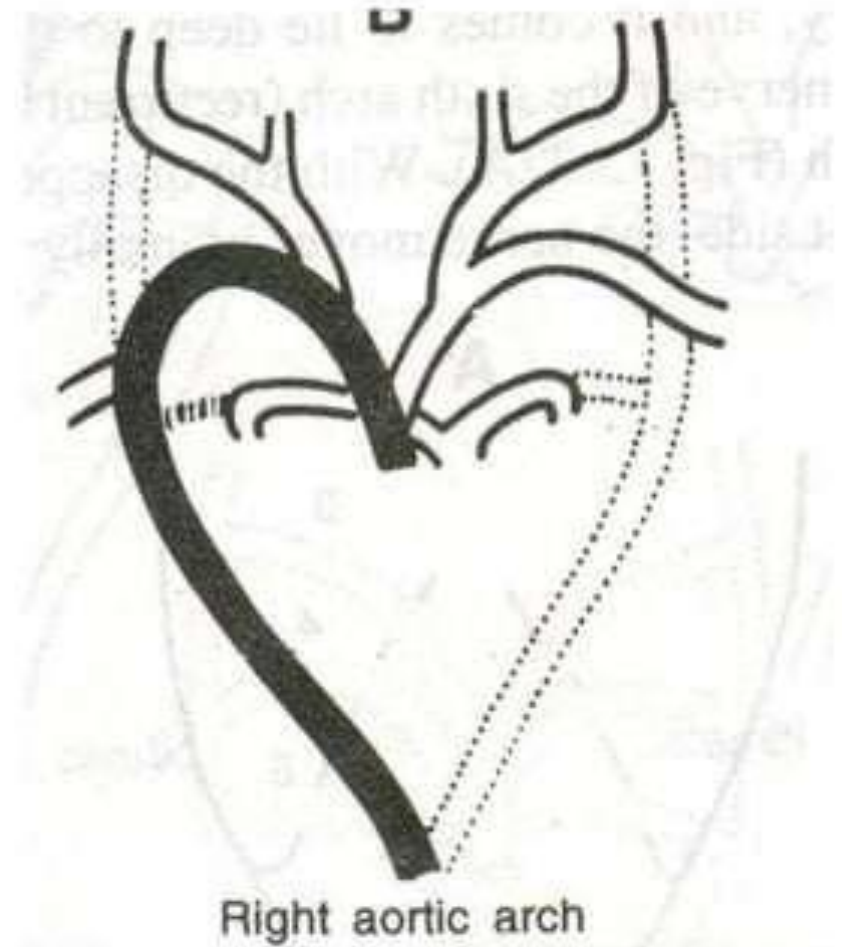
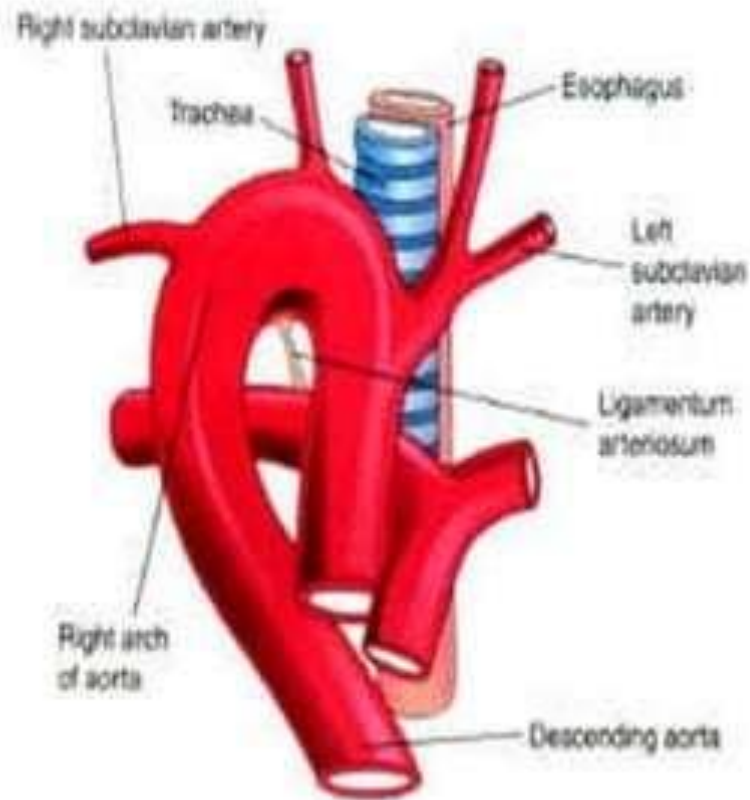


Abnormal Right Subclavian Artery

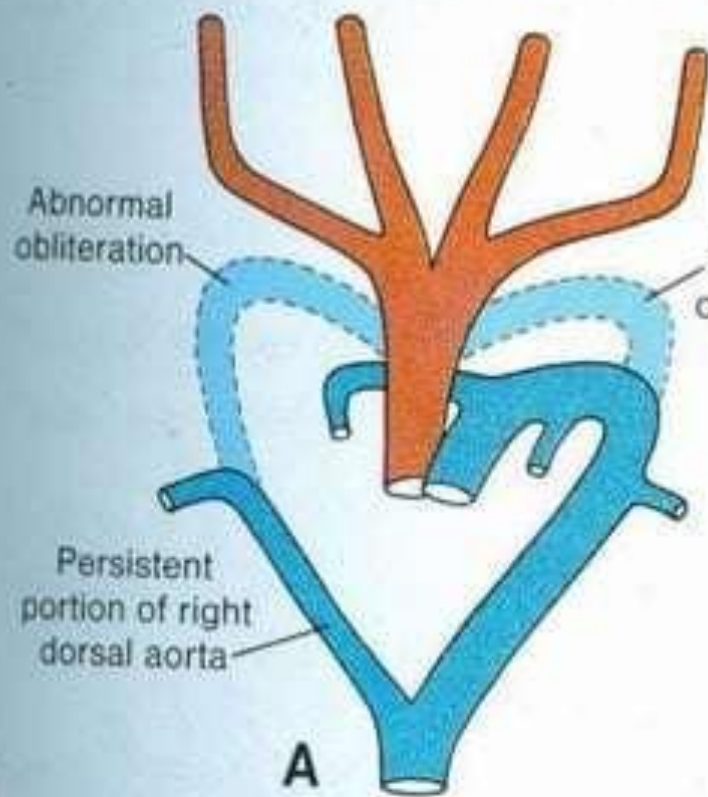
Double aortic arch



Right aortic arch

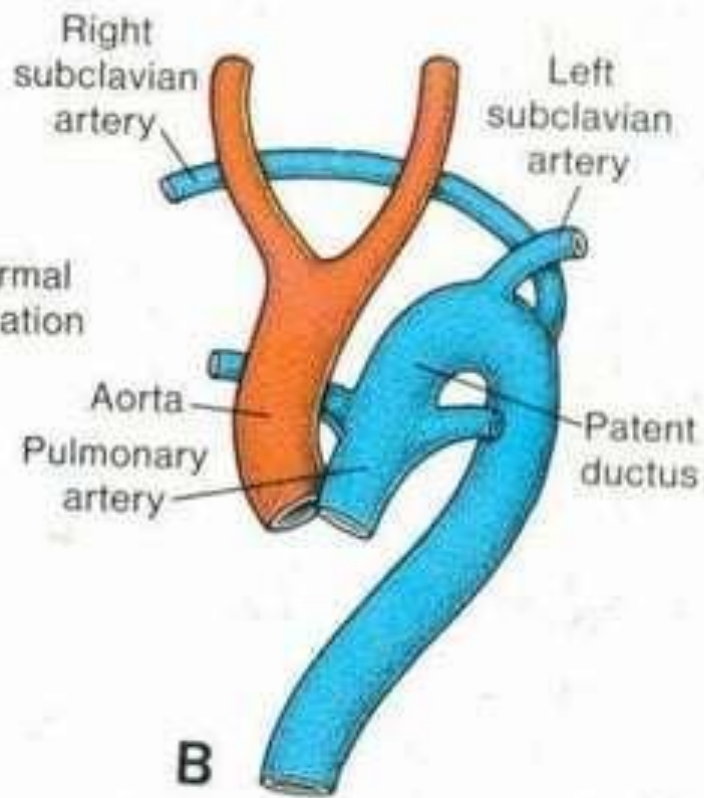


Interrupted aortic arch



A

Interrupted Aortic Arch



B

Persistent ductus caroticus

