Atypical Vascular Disorders

Chapter 22

Subclavian Steal

- Blood that is destined for the brain is shunted away from cerebral circulation due to a high-grade stenosis or occlusion in the subclavian or innominate artery
- Vertebral artery demonstrates retrograde flow on the ipsilateral side
  - Provides blood flow to the arm

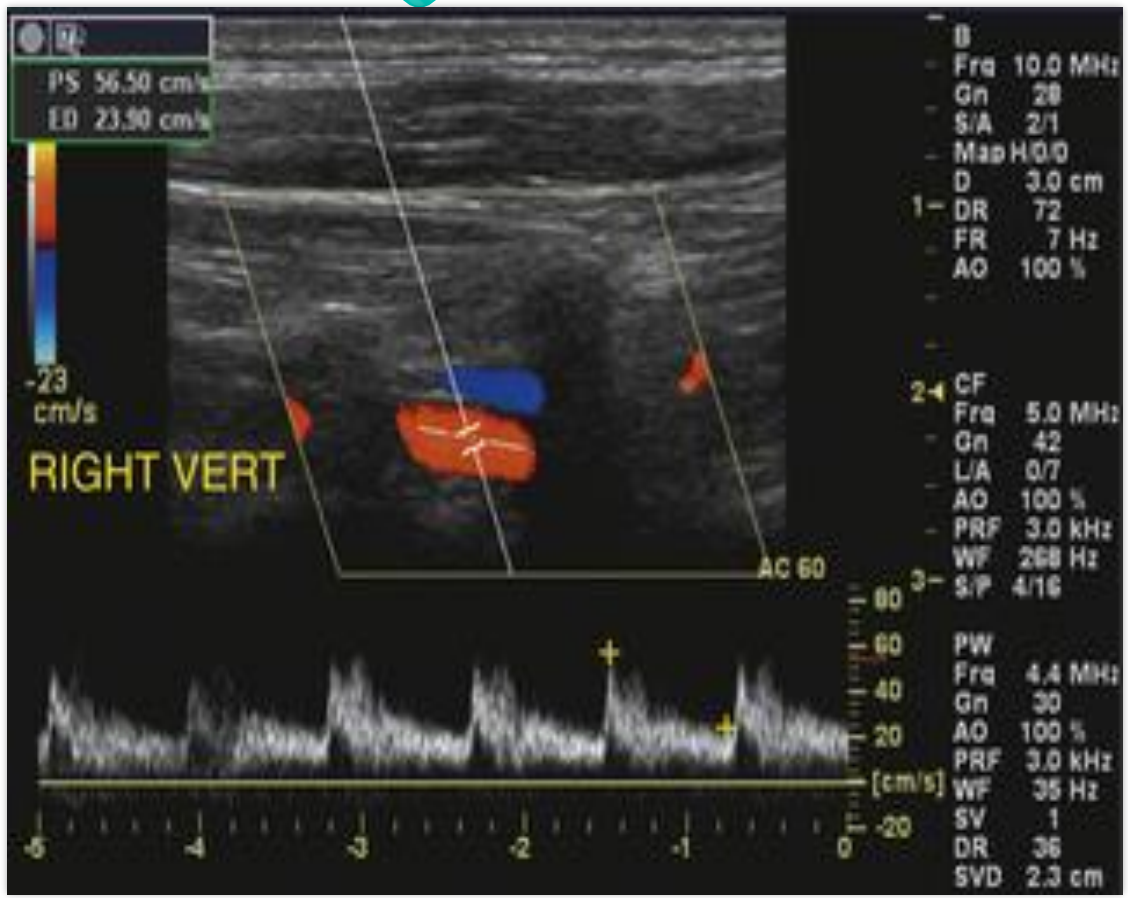
Subclavian Steal

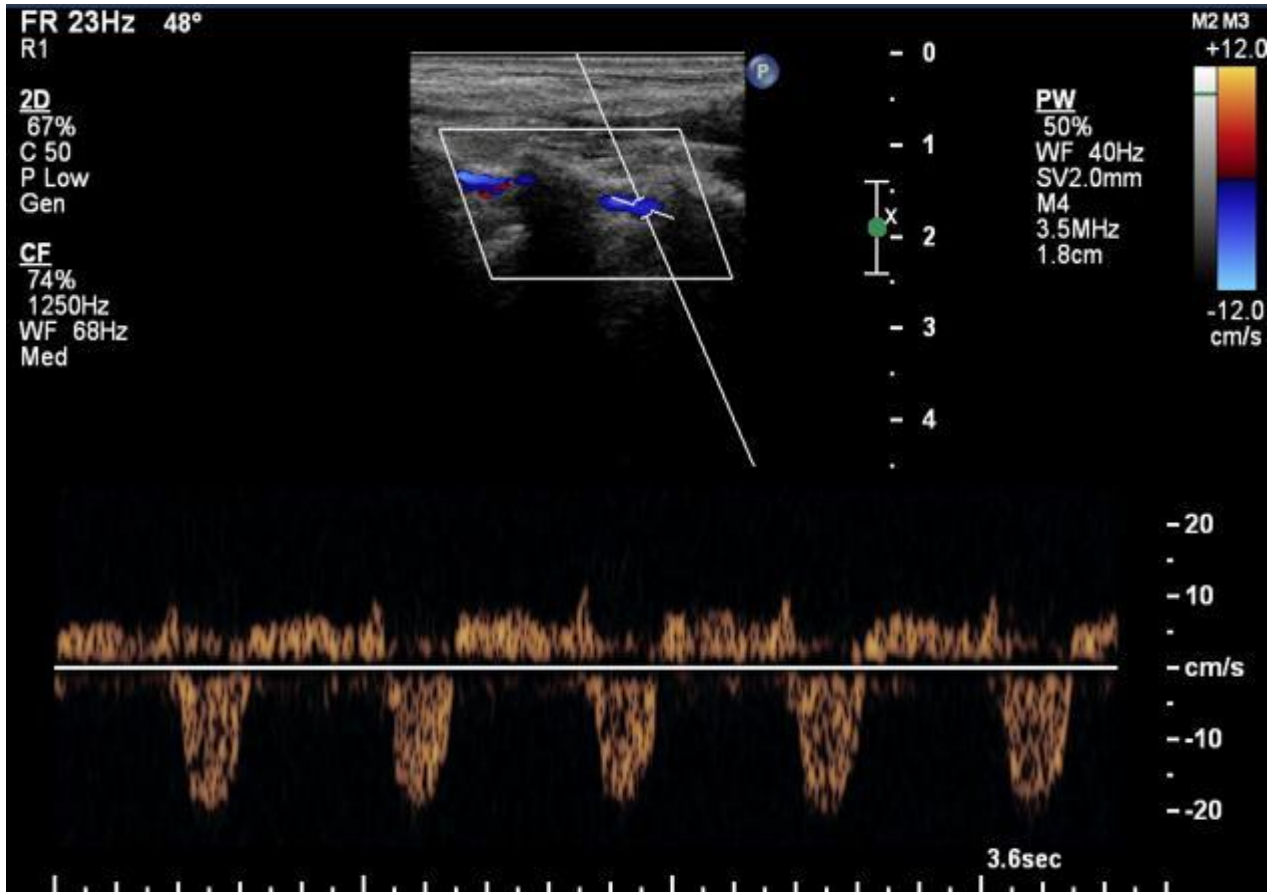
- Patients are usually asymptomatic
- Normally detected when taking both brachial blood pressures
  - Pressure difference of 15-20 mmHg between right and left arm will indicate an issue
  - Steal is found on the side with the lower arm pressure

Subclavian Steal

- When imaging with ultrasound, vertebral flow will be demonstrated as retrograde and flow resistance will be increased
- 90% of cases occur on the left side
- Contralateral vertebral artery may have an increase in size and flow velocity

Subclavian Steal





Takayasu's Arteritis

- Rare, systemic, inflammatory large-vessel vasculitis
  - ? autoimmune disorder
- Leads to thickening of the arterial walls, causing narrowing
- "*Pulseless disease*"

Takayasu's Arteritis

- Commonly affects women of childbearing age
- Symptoms include:
  - Dizziness
  - Headache
  - Fainting
  - Weakness and fatigue
  - Chest pain
- HTN
- Heart attack
- Stroke

Takayasu's Arteritis

- Angiogram is the best diagnostic tool
- Treatment is aimed to reduce inflammation
  - Corticosteroids or immunosuppressants
  - Surgery in severe cases

Temporal Arteritis

- Form of vasculitis where inflammation of the distal segment of the superficial temporal artery is visualized
  - Blood vessels near the temples are inflamed and constricted
- "*Giant Cell Arteritis*" or "*Horton's Arteritis*"

Temporal Arteritis

- Patients complain of:
  - Headaches
  - Temporal tenderness
  - Ipsilateral visual changes, possibly blindness
- B-mode may demonstrate an anechoic halo surrounding the vessel due to edema in the vessel walls

Temporal Arteritis

- Spectral analysis will show elevated velocities in the narrowed vessel
- Treatment consists of reducing the inflammation with corticosteroids