

به نام خدا

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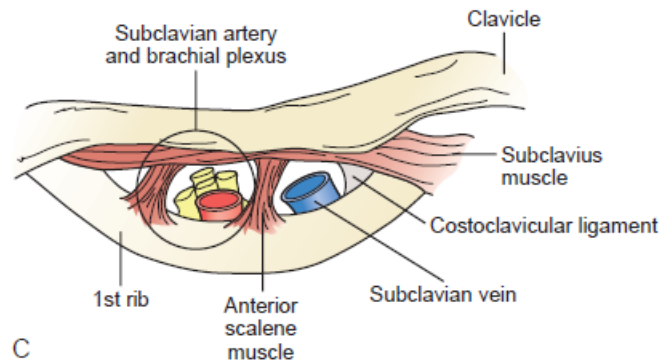
Anatomy

Medial: subclavius muscle and costoclavicular ligament

Lateral: the anterior scalene muscle

Superior: the clavicle

Inferior: the first rib



Definition & Devision

- presence of **compression** and subsequent **thrombosis** of the **axillo-subclavian** vein
- **Paget-Schroetter** syndrome
- Effort thrombosis
- Intermittent obstruction or **McCleery** syndrome
- Venography:
 - (1) acute subclavian-axillary vein thrombosis,
 - (2) chronic or recurrent subclavian-axillary vein thrombosis,
 - (3) high-grade symptomatic subclavian-axillary vein stenosis

Etiology

- Developmental anomalies of the **costoclavicular** space:
- Abnormalities of the **anterior scalene muscle** and **subclavius** tendon
- Presence of a **scalenus minimus** muscles
- **Bone abnormalities** of the clavicle and ribs,
- Ligamentous abnormalities of the **costocoracoid ligament**
- Repetitive overhead arm activities
- +/_ Coagulopathy

Sign & Symptoms

- Young athletes with repetitive arm movements
- Asymptomatic
- Intermittant Edema and Pain
- Subcutaneous Venous Collaterals (*1st rib bypass venous collaterals*)
- Acute Pain, Edema and cyanosis
- R/O secondary causes

Para clinical Evaluation

- Duplex US
- Duplex US with Arm Maneuvers
- Digital Venography with Maneuvers
- CTV and MRV usually are not helpful

Complications

- Risk of PTE is low < 10%
- Risk of phlegmasia cerulea dolans is very low
- Persistent edema
- Disability

Treatment

- Anticoagulation
- Thrombolysis
- Surgical decompression

Anticoagulation

- >40% had persistent symptoms or limited recovery
- In secondary DVT to prevent PTE and achieving recanalization
- Anticoagulation alone is not recommended
- Should be followed by decompression

Thrombolytic therapy

- Short term Results are very good
- Within 14 days of symptoms
- Poor results when associates with aggressive venoplasty and stenting
- Long term results if not followed by decompression is poor
- CDT+Decompression = Anticoagulation+Decompression

Approach to axilo-subclavian thrombosis

- Primary /secondary
- Anticoagulation / thrombolytic therapy
- Responsive to thrombolytic therapy +/_
- Extrinsic compression + /_
- If **Extrinsic** compression exists **NO ROLE FOR VENOPLASTY AND STENTING** before decompression
- **Decompression is the main Procedure for long term treatment**
- **Early Decompression is advised post thrombolytic therapy**

Surgery

- 1st Rib resection + External venolysis
- Trans axillary vs supraclavicular approach

Vein treatment after Rib resection

- Immediate Post operative venography and if needed venoplasty(Hybrid Room)
- 1-2 weeks delayed venography +/- venoplasty
- Venous reconstruction (infraclavicular incision)

Post Op Care

- Physical therapy at least 6 wks
- restoration of movement of the entire shoulder girdle
- strengthening of the anterior, middle, and posterior scalene muscles
- stretching of the trapezius, the sternocleidomastoid, the levator scapular, and the pectoralis minor muscle

Recurrence

- Residual of 1st Rib
- Scarring on the vein
- Consider thrombolytic therapy and then surgery

سیاس از توجه شما •