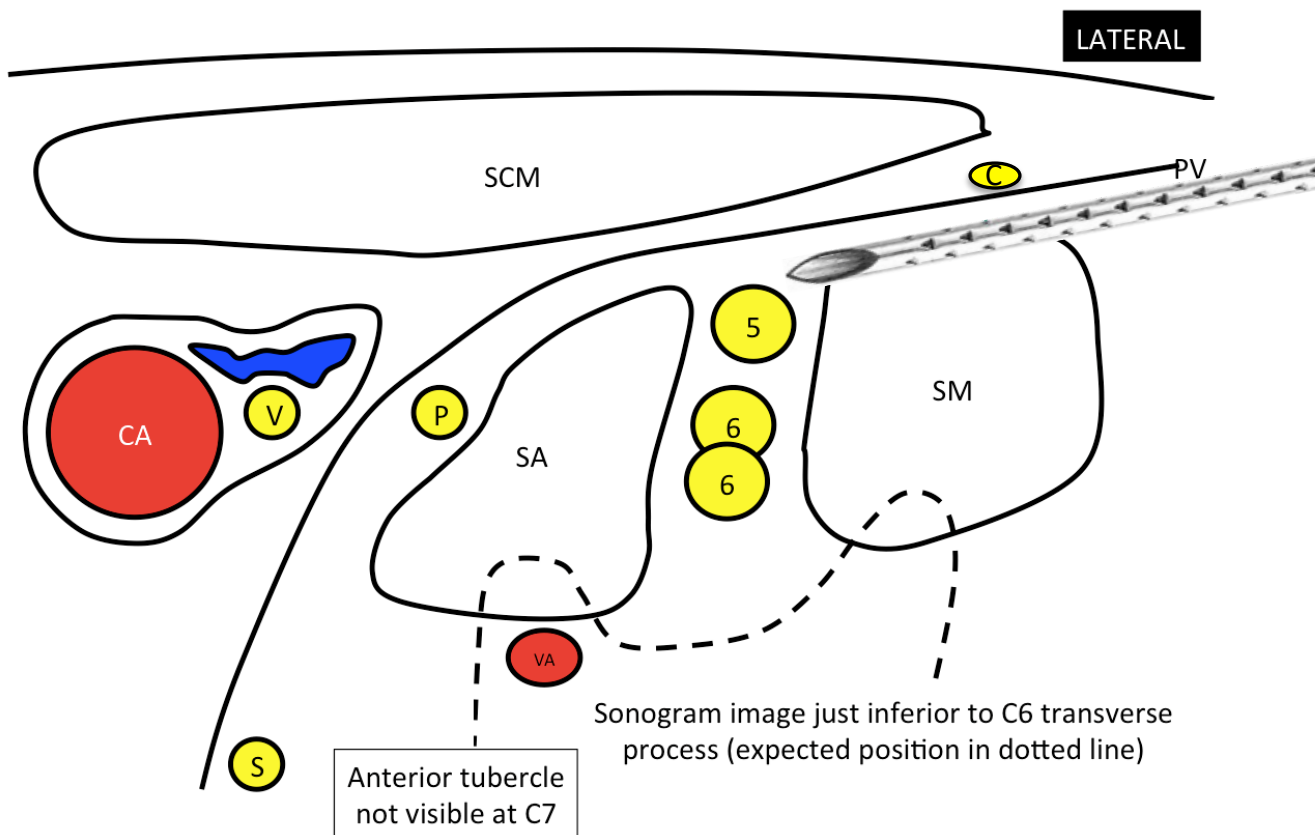


INTERSCALENE BLOCK

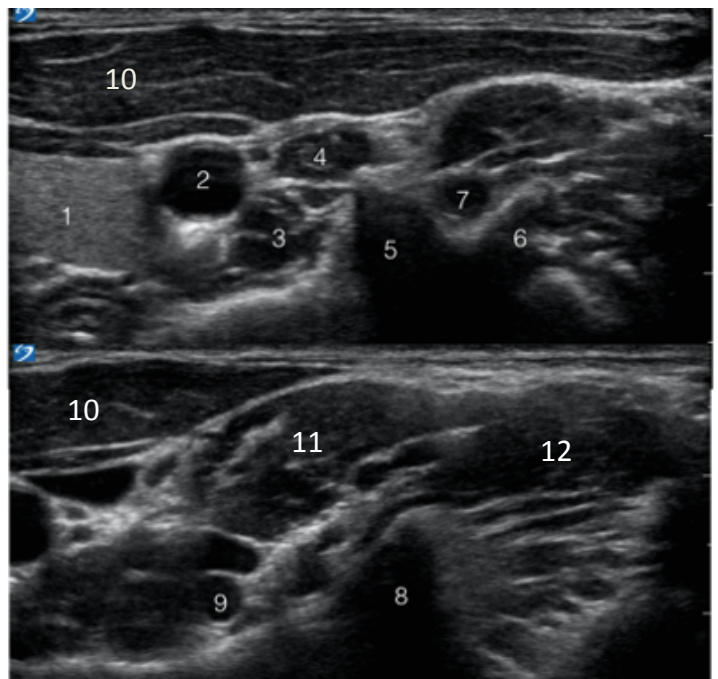
D. Wong
M. Barrington

Toolbox: online modules 8, 10, 15; RAP lecture 3, 23; hands-on module 3.



Above: key structures: Sternocleidomastoid (SCM), scalenus anterior (SA) and medius (SM) muscles; C5 (5), C6 (6) spinal nerves and vagus (V), sympathetic trunk (S) and phrenic (P) nerves; Carotid (CA) and vertebral (VA) arteries; Prevertebral fascia (PV); Superficial cervical plexus (C).

Sonogram (to the right) with cervical transverse processes (TPs) and nerve roots: 1. thyroid gland; 2. carotid artery; 3. longus colli muscle; 4. longus capitus muscle; 5. anterior tubercle of C5; 6. posterior tubercle of C5; 7. C5 nerve root; 8 posterior tubercle of C7; 9 C7 nerve root; 10. Sternocleidomastoid; 11. Anterior scalene muscle; 12. Middle scalene muscle. Neural elements and TP identified with dynamic scanning (DO NOT INJECT AT NERVE ROOT CLOSE TO TP)



KEY STRUCTURES

- STERNOCLEIDOMASTOID
- CAROTID SHEATH
- PREVERTEBRAL FASCIA
- PHRENIC NERVE
- SCALENUS ANTERIOR
- SCALENUS MEDIUS
- BRACHIAL PLEXUS (SPINAL NERVES C5 – C7, TRUNKS)

INNERVATION OF THE SHOULDER

- SUPRASCAPULAR NERVE (C5, C6: upper trunk)
- AXILLARY NERVE (C5, 6: branch of the posterior cord)
- SUPRACLAVICULAR NERVE (cervical plexus)
- Majority of innervation derived from upper trunk (C5-6) [minor contributions from middle trunk C7 (may be relevant if surgical block), lateral pectoral nerve and subscapular nerve]
- Injecting at the C5 – C6 level (upper trunk) facilitates reduced use of local anesthetic, reducing side-effects

INDICATIONS

- SHOULDER SURGERY (e.g. arthroscopy, arthroplasty, rotator cuff repair, subacromial decompression)
- PROXIMAL HUMERAL SURGERY

CONTRAINDICATIONS

- Contralateral recurrent laryngeal or phrenic nerve paresis
- Contralateral pneumonectomy or pneumothorax
- Reduced pulmonary reserve (relative contraindication)

SUGGESTED LOCAL ANESTHETIC DOSES

- 10 – 20 ml 0.2 – 0.5% ropivacaine (at the C5 – C6 level)

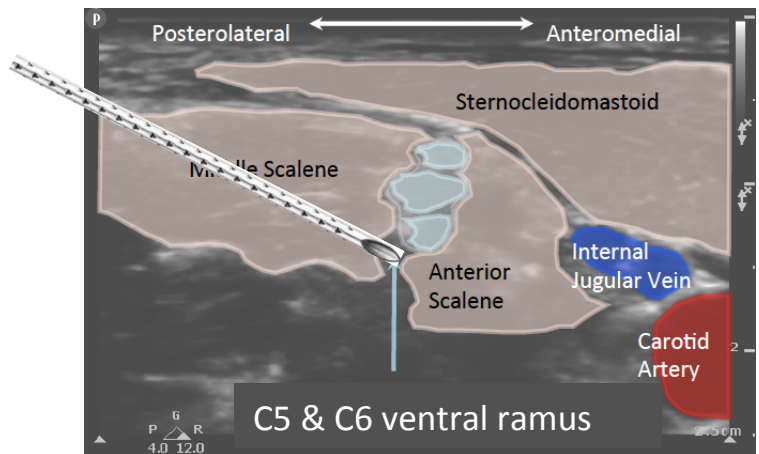
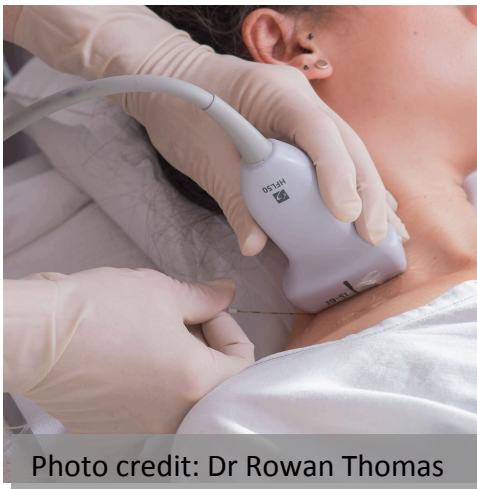
TRANSDUCER

- High frequency linear: 13 - 15 MHz, width: 25 – 50 mm

NEEDLE 50 mm

TIPS

- Avoid excessive needle instrumentation, the needle tip positions in the images below may provide perineural spread with no further movement. Neural elements are vulnerable to injury related to low connective tissue content



In examples: cease needle trajectory at these points and hydro-dissect with goal of opening up space between SA and SM. Injection at locations illustrated in this section will not result in blockade of C8-T1

