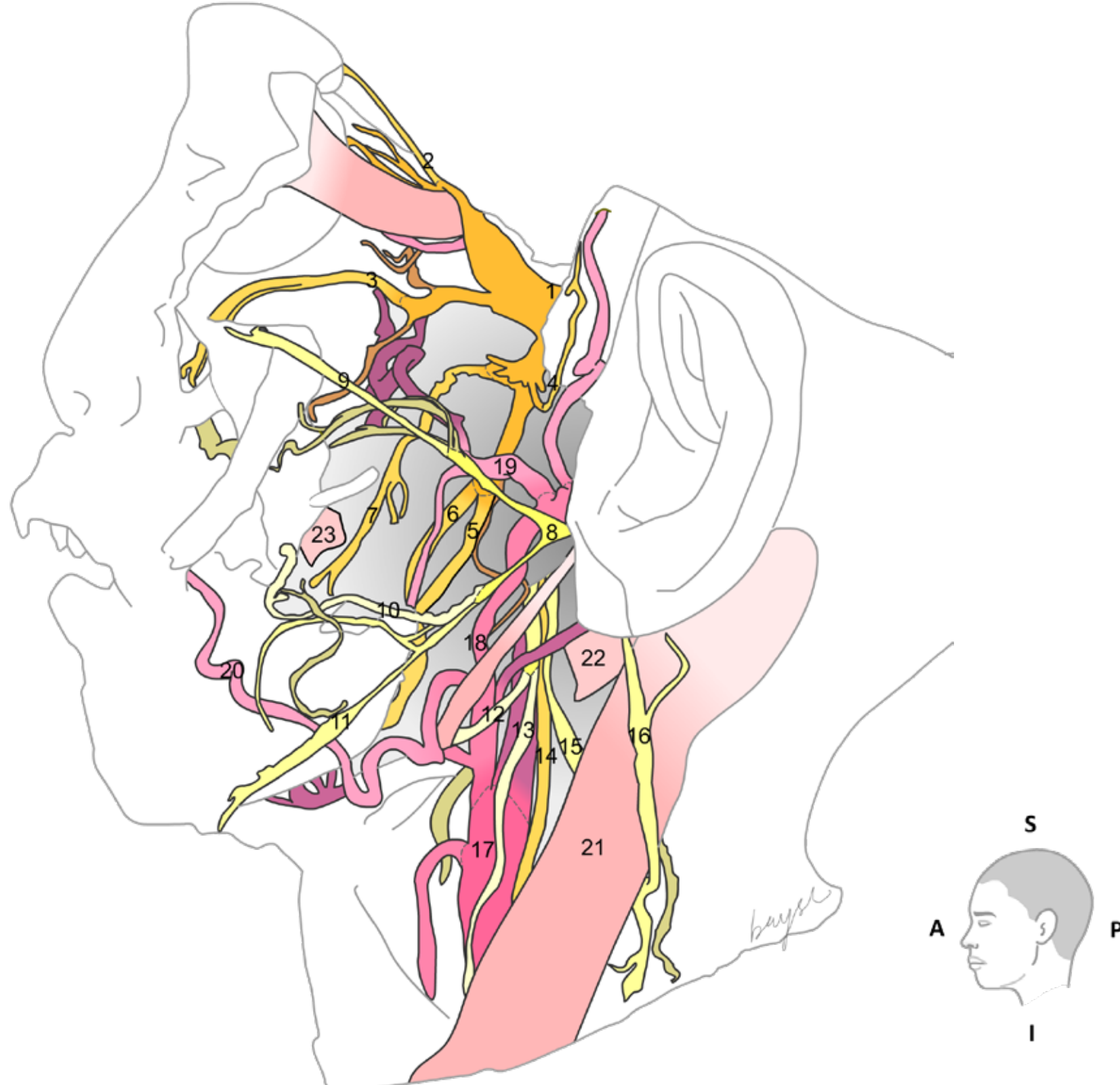


NEUROVASCULAR STRUCTURES OF THE FACE AND NECK



Left view of the face. Showing the trigeminal (V), facial (VII), vagus (X), spinal accessory (XI) and hypoglossal nerves (XII).

Nerves	1.	Trigeminal ganglion
	2.	Frontal nerve from the ophthalmic division (V1) of the trigeminal nerve
	3.	Infraorbital nerve from the maxillary division (V2) of the trigeminal nerve
	4.	Auriculotemporal nerve from the mandibular division (V3) of the trigeminal nerve
	5.	Long buccal nerve from the mandibular division (V3) of the trigeminal nerve
	6.	Lingual nerve from the mandibular division (V3) of the trigeminal nerve
	7.	Inferior alveolar nerve from the mandibular division (V3) of the trigeminal nerve
	8.	Facial nerve (Root)
	9.	Facial nerve (Zygomatic branch)
	10.	Facial nerve (Buccal branch)
	11.	Facial nerve (Marginal mandibular branch)
	12.	Hypoglossal nerve
	13.	Descending limb of ansa cervicalis
	14.	Vagus nerve
	15.	Spinal accessory nerve
	16.	Great auricular nerve
Arteries	17.	Common carotid artery
	18.	External carotid artery
	19.	Maxillary artery
	20.	Facial artery
Muscles	21.	Sternocleidomastoid
	22.	Digastric posterior belly(cut)
	23.	Buccinator

- The trigeminal nerve supplies the skin of the face (sensory-pain, temperature and touch), muscles of mastication (mandibular nerve) and the temporomandibular joint.
- The facial nerve supplies the muscles of facial expression. Injury to it causes lower motor neuron lesion which would result in ipsilateral facial muscle paralysis. The patient would not be able to close his / her eye on the affected side, ptosis of upper eyelid, sagging of angle of mouth etc.
- The vagus nerve descends through the neck. It has a wide distribution which supplies the CVS, respiratory system, digestive system, etc. The spinal accessory nerve supplies the sternocleidomastoid muscle and trapezius.
- The hypoglossal nerve supplies all intrinsic and extrinsic muscles of the tongue except for the palatoglossus muscle.

Clinical Correlation – Damage to the facial nerve can have various etiologies including trauma, stroke, idiopathic Bell palsy, neoplasm or granulomatous meningitis. It is very important not only to recognize the cause of the paralysis but also the side at which the lesion has occurred. Inflammation of the trigeminal nerve or other causes may result in trigeminal neuralgia (also known as tic douloureux).

Q: How do you test the lesion of the above-mentioned cranial nerves?