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Anterior Triangle of the Neck

Tuesday, February 12, 2008
1:00 PM

Landmarks and osteology:

Skull - yeah...

Mastoid process (N 4,8,13) - posterior to mandible, behind ear

Mandible (N 15) - jaw

Mental protuberance (N 2,15) - chin

Inferior border of mandible (N 15)

Angle of the mandible (N 15) - where jaw goes from vertical to horizontal

Sternum (N 1, 185)

Jugular notch

Visceral skeleton (N 28,29,77) - neck?

Hyoid bone -bone of the neck

Thyroid cartilage - anterior cart. of larynx; connected: above to hyoid bone via thyrohyoid membrane, below to cricoid cart. via inferior horn, posteriorly to arytenoid cart. via vocal lig. & thyroarytenoid m., posteriorly to epiglottic cart. via thyroepiglottic lig.; tilts forward to increase tension on vocal lig. & increase pitch of voice

Laryngeal prominence - outcropping of thyroid cartilage above larynx

Cricoid cartilage - inferior/posterior cartilage of larynx

Trachea -

Cervical triangles: (N 28) - dissector 2

Deep cervical fascia: (N 35A,35B) - dissector 4

Muscles:

Platysma m. (N 26) - thin membrane like muscle, most superficial; originates from fascia overlying pectoralis and deltoids, inserts to inferior border of mandible and skin of lower face; draws corners of mouth down, aids in depression of mandible; innervated by cervical branch of facial nerve (VII)

Sternocleidomastoid m. (N 27,28) - dissector 1

Infrahyoid (strap) mm. (N 28,29,31) - dissector 1

Sternohyoid m.

Omohyoid m. (superior & inferior bellies)

Sternothyroid m.

Thyrohyoid m.

Cricothyroid m. (and median ligament) (N 31,74,77) - arch of cricoid cart to inferior border of thyroid cart; external br. of sup. laryngeal n.; only intrinsic muscle of larynx not supplied by inferior br. of recurrent laryngeal n.

Nerves:

Cervical plexus - VPR of C1-C4

Cutaneous nn. (N 24,31,32,129)

Lesser occipital n. - C2; skin behind ear; runs under SCM then posterolateral to it alongside (infero-posterior to) great auricular

Great auricular n. - C2 and C3; skin of ear and below ear; see lesser occipital for location

Transverse cervical n. - C2 and C3; skin of neck anteriorly; number of branches travelling toward midline from under external jugular above SCM

Supraclavicular nn. - C3 and C4; skin of root of neck, upper chest, upper shoulder; number of branches traveling inferiorly toward clavicle

Motor nn. (N 36,135)

Ansa cervicalis - sup/inf roots; branches to strap muscles

Superior & inferior roots - C1 /C2 and C2/C3; inferior lateral to superior

Cervical branch of facial n. (CN VII) (N 29,51) - supplies muscles of lower face/platysma; runs along internal jugular vein

Vagus n. (X) (N 132) - in carotid sheath btwn carotid and internal jugular

Superior laryngeal n. (N 78,79,80) - branches off vagus superior to thyroid; supplies the cricothyroid, inf. pharyngeal, mucous glands of larynx above vocal folds.

External br. (N 74,75,76) - runs anteriorly to inferior pharyngeal constrictor and supplies cricothyroid; travels w/ superior thyroid artery

Internal br. (N 67,74,75,76) - runs posteriorly to inferior pharyngeal constrictor

Recurrent laryngeal n. (N 74,75,76) - branches off vagus to run inferiorly to thyrocervical trunk on left and aortic arch on right then loops back up; supplies upper esophagus, lower pharynx, laryngeal muscles except cricopharyngeus, tracheal smooth muscle etc.; runs in tracheoesophageal groove

Hypoglossal n. (XII) (N 32,71,128) - from medulla of brain; innervates muscles of tongue; gives off superior branch of ansa cervicalis to thyrohyoid

Vessels: - refer to netter's

Superficial vv.

External jugular v. (N 31,74)

Anterior jugular v. (N 31,74)

Communicating v. (N 31,74)

Jugular venous arch (N 256)

Common & external carotid aa. (N 31,32,33,34)

Superior & inferior thyroid aa. & vv. (N 74,75,76)

Internal jugular v. (N 31)

Middle thyroid v. (N 74)

Superior laryngeal a. (N 74,76)

Thyroid gland: (N 74)

Lobes

Isthmus

Pyramidal lobe

Parathyroid glands (N 75)

Miscellaneous:

Thyrohyoid membrane (N 77)

Tracheoesophageal groove (N 76)

Deep cervical lymph nodes (N 72)

Clinical Terms:

Goiter - enlargement of thyroid gland, not cancerous

Tracheostomy - surgical creation of airway in trachea; usually done below thyroid cartilage

Cricothyrotomy - emergency cut or passageway made in cricothyroid membrane

Thyroidectomy - removal of all/part of thyroid gland; surgery can result in vocal cord paralysis by cutting recurrent laryngeal or accidental removal of parathyroid glands

Thyroglossal duct cyst - fluid-filled sac present at birth in midline of neck; results of incomplete closure of segment of tube-like structure that should close w/ embryonic development

Torticollis - wry neck, contracted state of cervical muscles usu. SCM, producing twisting of neck and unnatural position of head