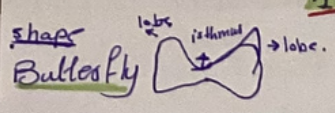


Thyroid

the body's largest endocrine gland
 produce T_3, T_4 \Rightarrow control \rightarrow rate of metabolism
 calcitonin \Rightarrow control Ca metabolism

site . deep to \rightarrow sternothyroid / sternohyoid
 anteriorly in neck



surrounded by a thin fibrous capsule.
 ensheathed by pretracheal fascia (cervical fascia)

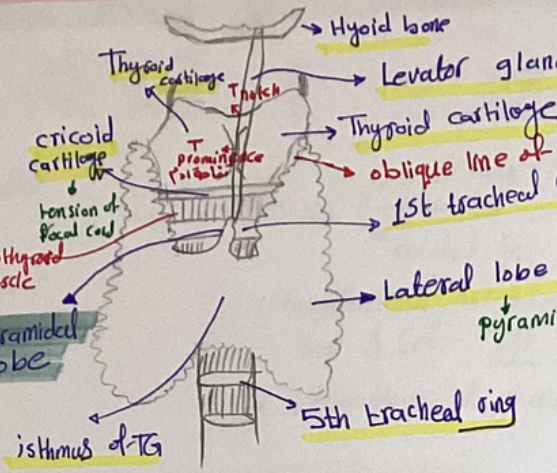
(may be present)
 projects upward from the isthmus & may be connected by fibromuscular band called levator glandulae thyroideae.
 remnants of thyroglossal duct in embryo.

Isthmus \Rightarrow Horizontal
 2 surfaces \rightarrow Anterior \rightarrow strap muscles (sternothyroid & sternohyoid)
 anterior jugular V
 posterior \rightarrow 2nd, 3rd & 4th tracheal rings

2 edges/borders
 superior \Rightarrow associated with anastomosis between the anti branches of 2 superior thyroid arteries
 inferior \Rightarrow along this border inferior thyroid vein & thyroid ima artery (when present) enter.

Postero lateral
carotid sheath & its contents
 common carotid A
 IJV
 vagus N
 The ansa cervicalis is embedded in the anterior wall of the sheath.

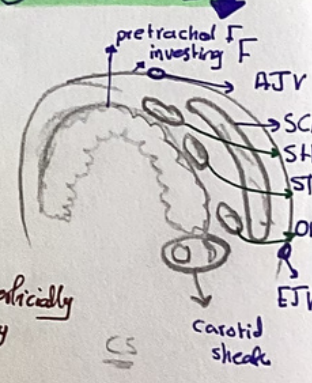
2 parathyroid glands are embedded in the posterior surface of each lobe
 inferior thyroid A (before entering the gland)



Every Lobe has:
V apex \Rightarrow pointed upward & laterally
 reaches up to the oblique line
 sandwiched (IC muscle of pharynx medially, sternohyoid laterally).
V Base \Rightarrow reaches down to 6th or 6th tracheal ring
 related to \Rightarrow inferior thyroid A, recurrent laryngeal N

*pretracheal fascia swelling moves with swallowing! (case)
 digital aspiration.
 من سواد في كونه لونه
 thyroid \Rightarrow pituitary
 Parathyroid \Rightarrow Ca level in blood

each Lateral lobe has 3 surfaces
Anterolateral (superficial)
 skin superficial fascia (containing platysma)
 deep fascia (pretracheal fascia)
 upper part \Rightarrow crossed by sup. belly of omohyoid.
 middle part \Rightarrow covered by SH superficially, ST deeply
 lower part \Rightarrow overlapped by the anti. border of sternomastoid.



Medial surface \rightarrow Tubes
 upper part
 Larynx, thyroid, cricoid cartilage & cricothyroid mus.
 Pharynx, IC mus.
 External laryngeal N
 lower part
 Trachea
 Cervical Esophagus
 recurrent laryngeal N (in between)

✓ Borders

↳ Anterior

thin splits / sharp superficial & medial surfaces
 related to:
 • ant. branch of the superior TA

↳ Posterior

thick / rounded / blunt - splits medial & posterior surfaces.
 related to:-

- longitudinal arterial anastomosis (1) Sup. & Inf. TA
- Parathyroid glands.

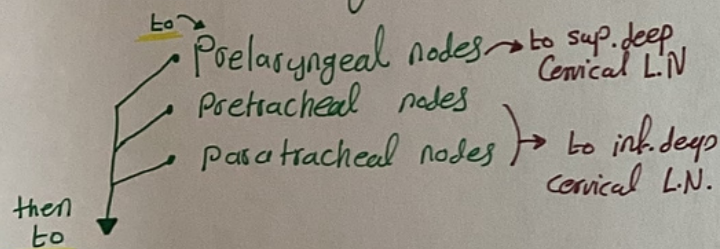
Arterial blood supply

• Superior thyroid A ^{near}
 (1st ant. branch of ext. carotid artery)

• Inferior thyroid A ^{away}
 (from the thyrocervical trunk, a branch ~~from~~ of the 1st part of subclavian A)

- occasionally → • thyroid ima. A.
 (From the arch of aorta, brachiocephalic A, or left common carotid A)
- It supplies the isthmus of TG _{*trachea}

Lymphatic drainage



- superior deep cervical nodes
- or
- inferior deep cervical nodes.

* some lymphatic vessels may drain to brachiocephalic LN or thoracic duct.

Venous drainage

• Superior thyroid V ascends along the superior thyroid A at the apex of the lobe & become a tributary of the ~~IVC~~ IJV

• Middle thyroid V very short vein, arise from the middle of the lobe & ends in the IJV.

• Inferior thyroid V arises from the lower border of the isthmus & adjacent part of lobes. They descend anterior to the trachea & collect into one vein which usually ends in the left innominate V.

Applied Anatomy

- superior to the upper pole of the thyroid, the external laryngeal N run with the sup. thyroid A before turning medially to supply the cricothyroid mus.
- In 21% the nerve is intimately associated with the sup. thyroid vessels

High ligation of S.T.A during thyroidectomy may cause injury of ELN

Ligation of I.T.A near the lower pole of TG can lead to injury of recurrent laryngeal N as they are near

Parathyroid

4
 Small
 oval
 yellow-brown

upper ⇒ adjacent to the post. surface of the middle part of thyroid lobe.

lower ⇒ lateral or posterior surface of lower part of thyroid lobe. (their position is variable).

↓ secrete

PTH, ↑ Ca in blood.

Ca level ~~↓~~ ↑ ~~PTH~~ _{*hypocalcaemia}

Arterial supply ⇒ I.T.A

Nerve supply ⇒ Symp. (only vasomotor)

Lymphatic vessels ⇒ From parathyroid G_i drain with those from TG_i into deep Cervical L.N & Para-tracheal L.N.

accidental parathyroidectomy ⇒ ↓ Ca in blood