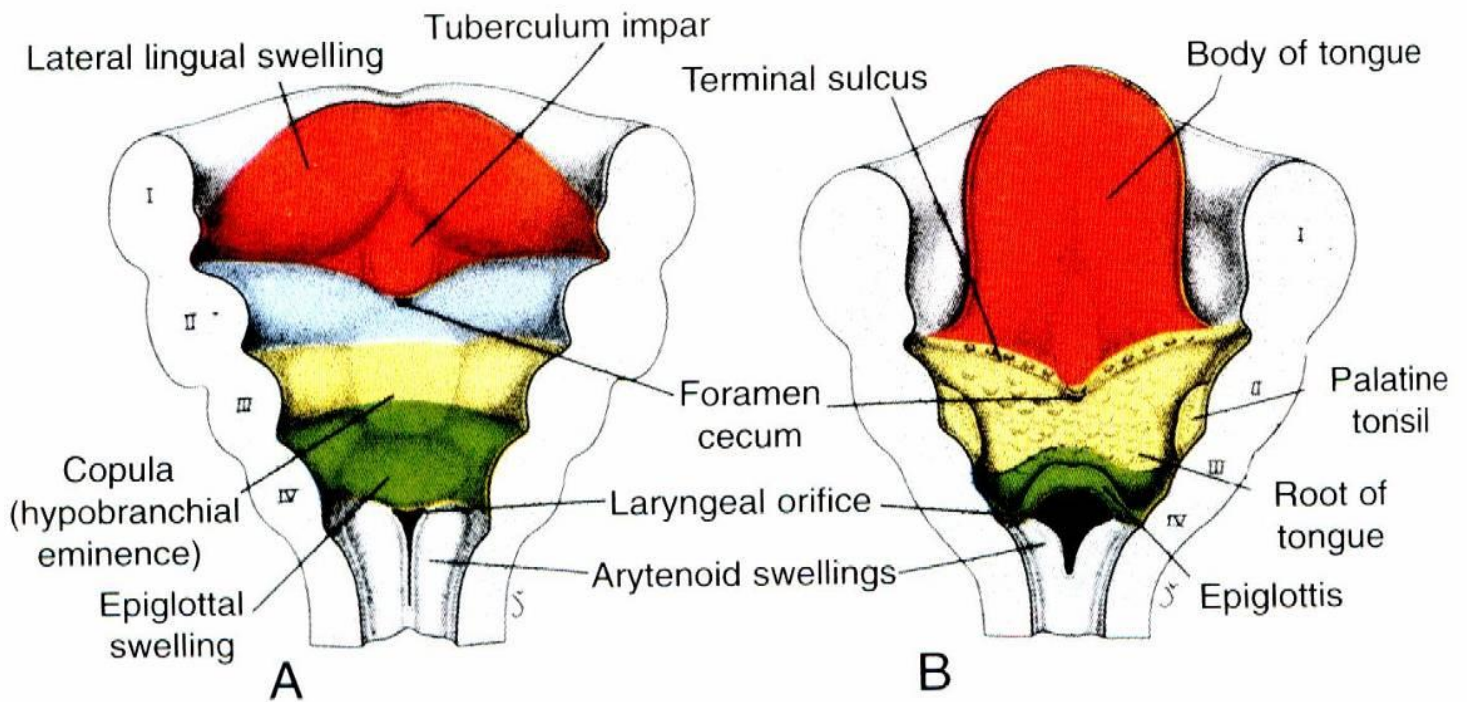


DEVELOPMENT OF THE THYROID GLAND

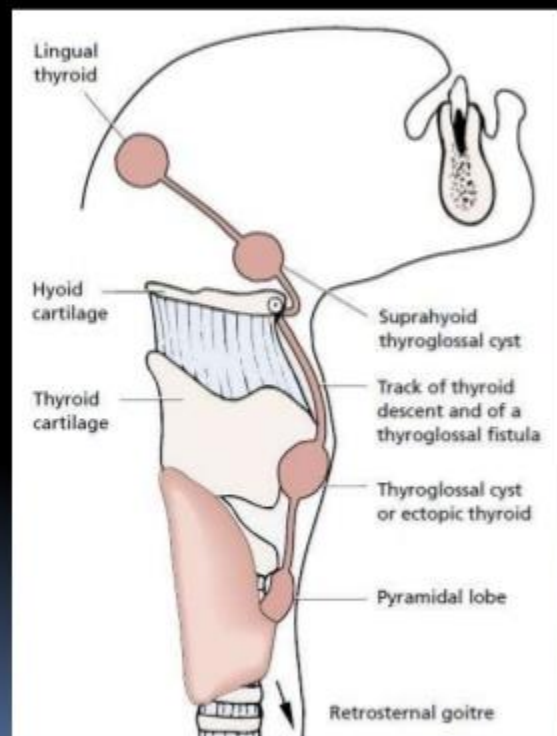
- ***Thyroid primordium*** appears as a median endodermal proliferation in the floor of the pharynx between tuberculum impar and hypobranchial eminence (the site is indicated by **foramen caecum** in adult tongue).
- ***This proliferation*** is invaginated to form a bilobed diverticulum which descends **ventral to the developing hyoid bone** then **ventral to the developing larynx**.
- ***It remains*** connected to the dorsum of tongue by the **thyroglossal duct**.
- The thyroid gland finally reaches its position by 7th week.
- Note that:
 - ***The thyroid follicles*** are derived from endodermal cells of the thyroglossal duct.
 - ***The parafollicular (C) cells*** are derived from the ultimobranchial body.
 - ***The true capsule and connective tissue septa*** are derived from mesoderm.
- **Fate of the thyroglossal duct:**
 - The part of duct between hyoid bone and isthmus of the gland gives rise to pyramidal lobe and levator glandulae thyroideae or may degenerates completely.
 - Above the hyoid bone the ***duct degenerates completely***.
- **CONGENITAL ANOMALIES OF THE THYROID GLAND**
 - 1- Thyroid agenesis:** congenital absence of thyroid gland.
 - 2- Lingual thyroid:** the thyroid fails to descend and lies in the substance of tongue.
 - 3- Aberrant thyroid (retrosternal thyroid):** the thyroid descends to reach thorax.
 - 4- Thyroglossal cyst :** due to persistence patancy of a part of the thyroglossal duct.
 - 5- Thyroglossal fistula:** It is acquired due to rupture of infected cyst leading to communication between the thyroglossal duct and skin of neck.

-Thyroglossal cyst & fistula moves with deglutition & protrusion of tounge .

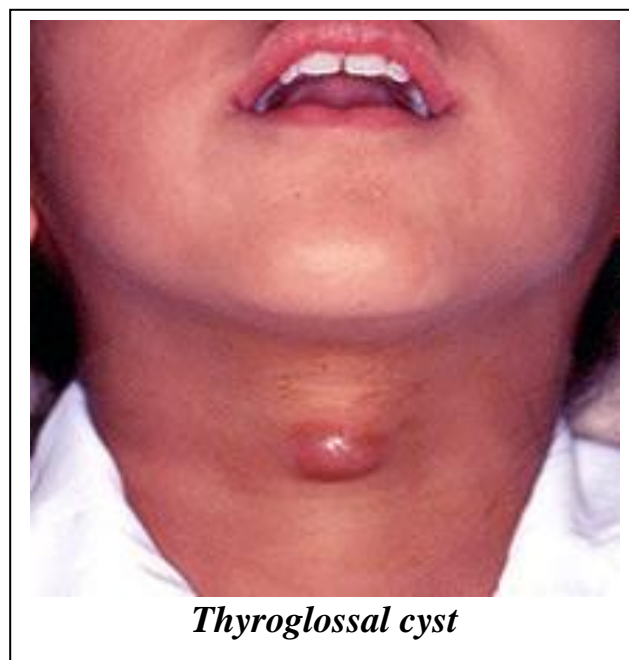
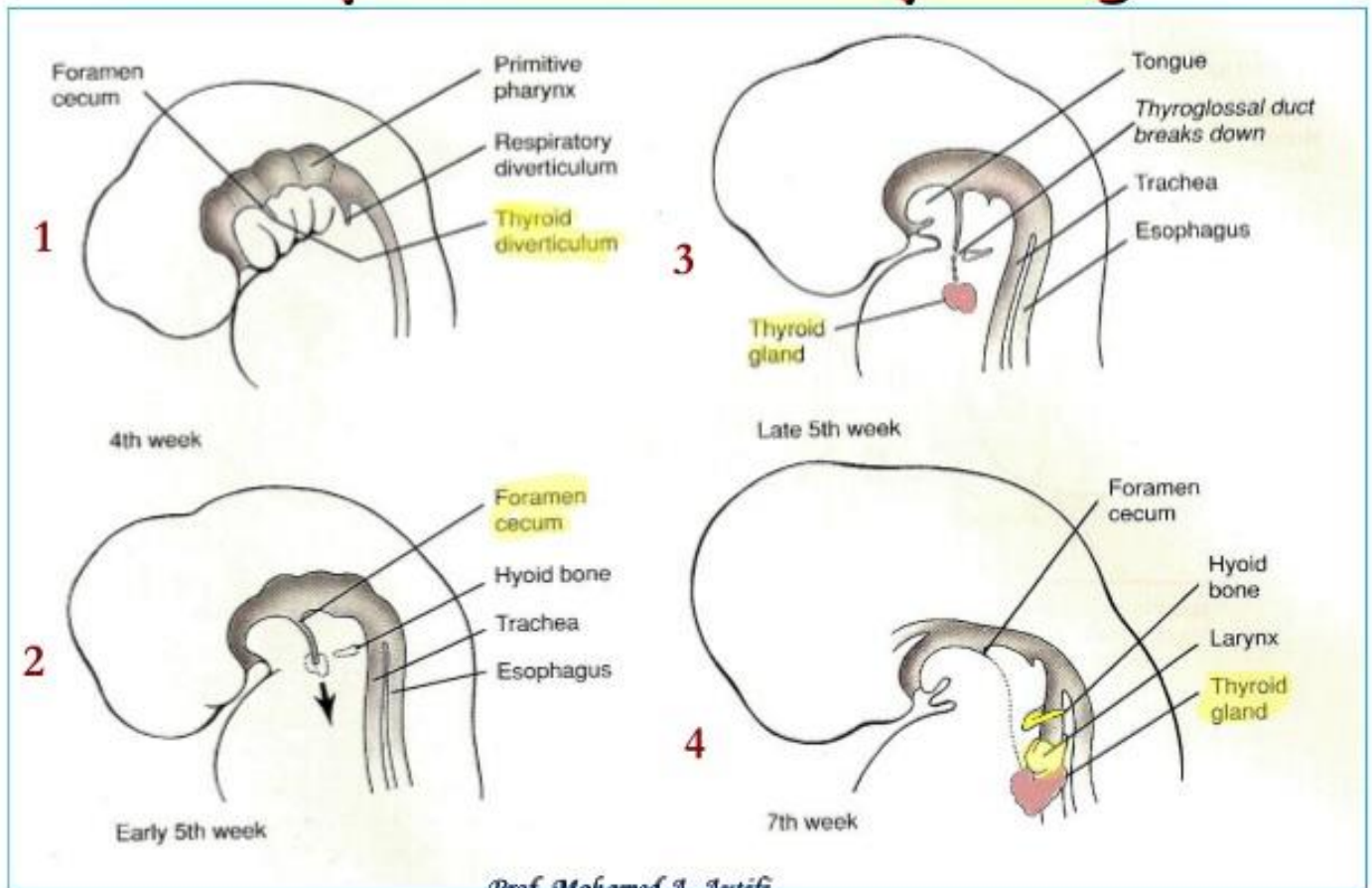


Embryology

The descent of the Thyroid, showing possible sites of ectopic thyroid tissue or thyroglossal cysts, and also the course of a thyroglossal fistula. The arrow shows the further descent of the thyroid that may take place retrosternally into the superior mediastinum.



Development of the thyroid gland



Thyroglossal Duct Cyst

- Thyroglossal duct normally disappears but remnants of epithelium may remain and form a thyroglossal duct cyst
- **The cyst is usually near or within the body of the hyoid and forms a swelling in the anterior part of the neck always on the midline of the neck!!!!**
- Size 1 to 4 cm in diameter
- Lined by stratified squamous epithelium, and **cyst may harbor lymphoid aggregates or remnants of recognizable thyroid tissue – important diagnostic sign!**

