

وسهلا



أهلا

يُمنع أخذ السلايدات بدون  
إذن المحرر واي اجراء  
يخالف ذلك يقع تحت طائلة  
المسؤولية القانونية  
جميع المعلومات للاستخدام  
التعليمي فقط

الأستاذ الدكتور يوسف حسين

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دكتورة من جامعة كولونيا المانيا

اليوتيوب د. يوسف حسين

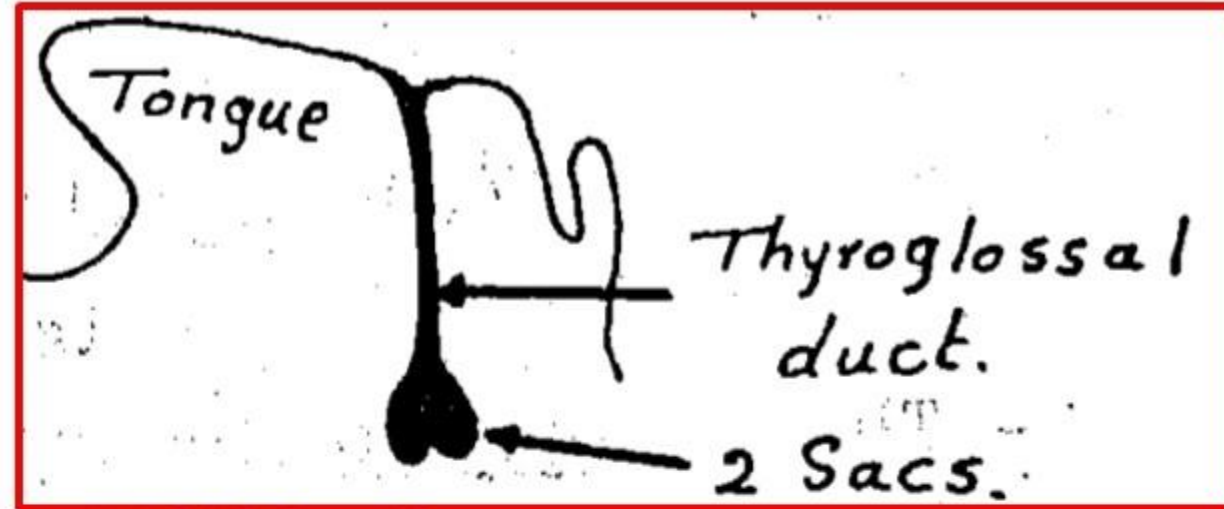
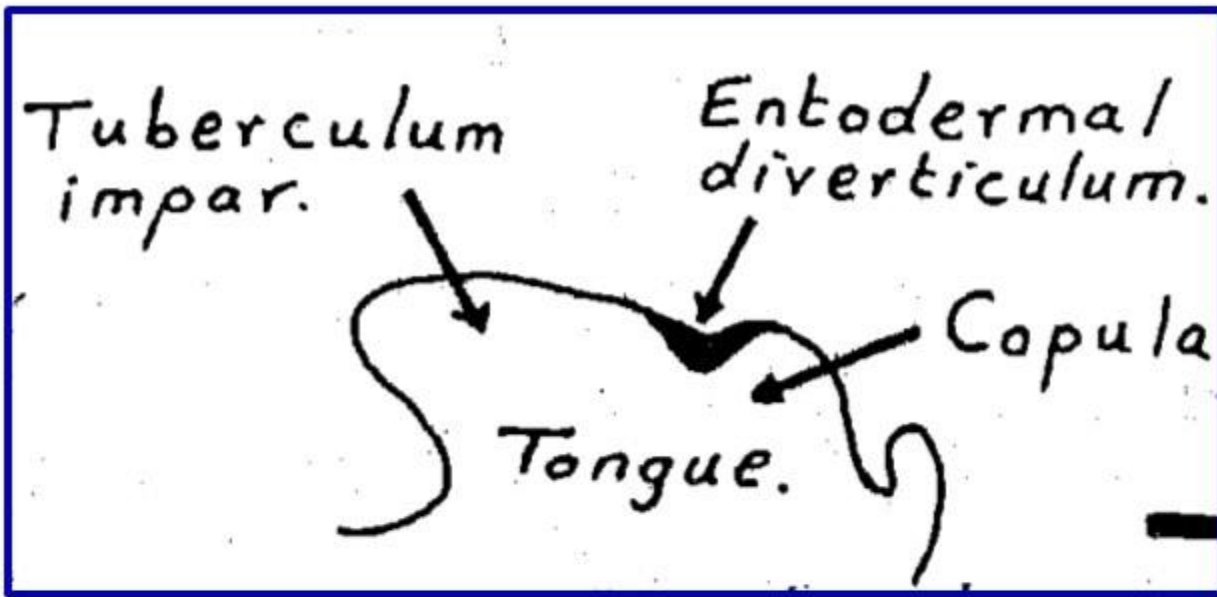
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الواتس 00201224904207

dr\_youssefhussein@yahoo.com

# Development of Thyroid gland

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- **Endodermal diverticulum** develops at the developing tongue between the **tuberculum impar** and **copula of His**.

- The diverticulum elongates caudally in middle line of neck in front developing **laryngotracheal tube** forming **thyroglossal duct**.
- The **distal end** dilates and divides into 2 sacs.



Foramen caecum.

At apex of sulcus terminalis on dorsum of tongue is the remnant of thyroglossal duct  
Hyoid bone.

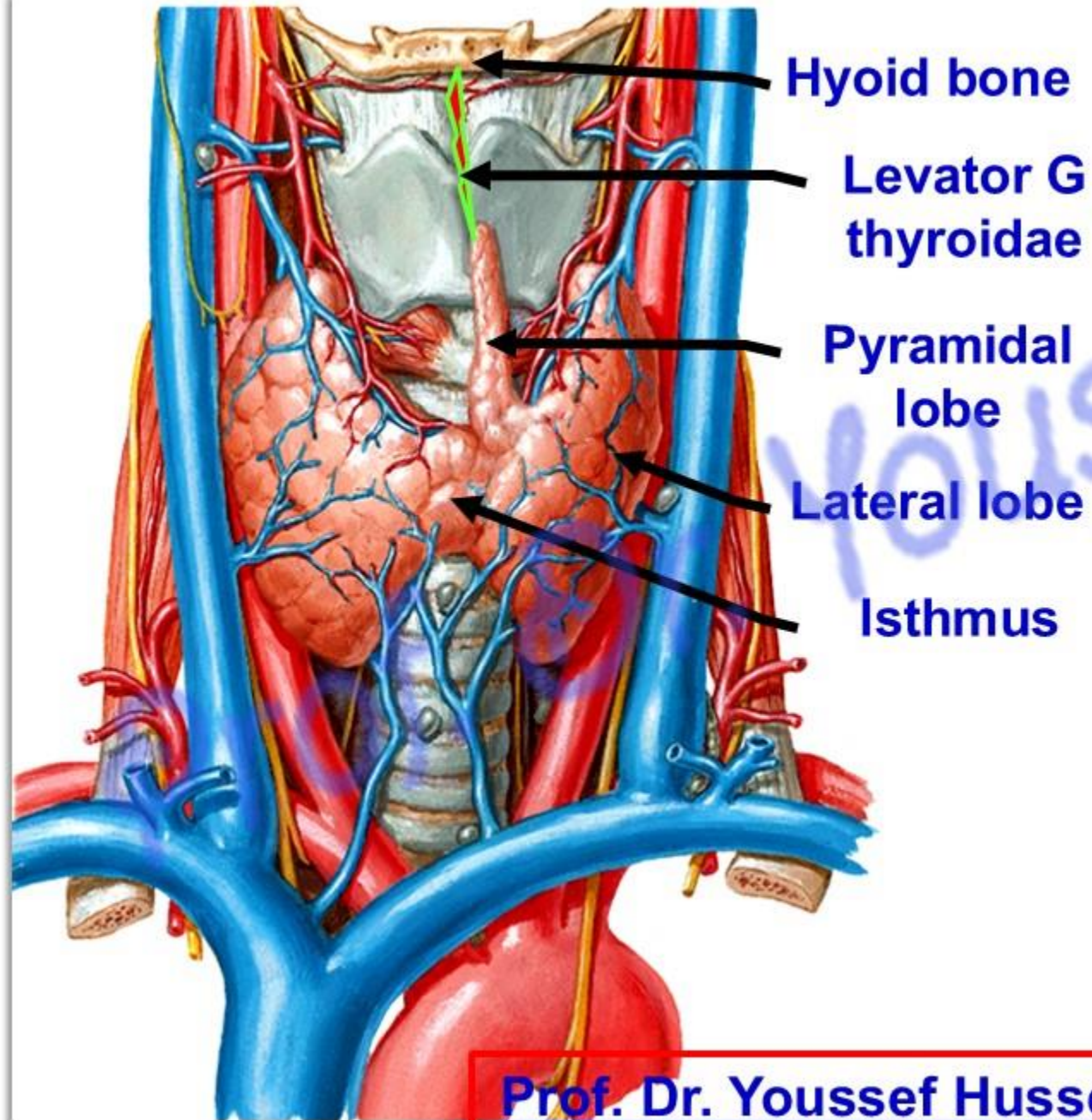
Thyroid cartilage.

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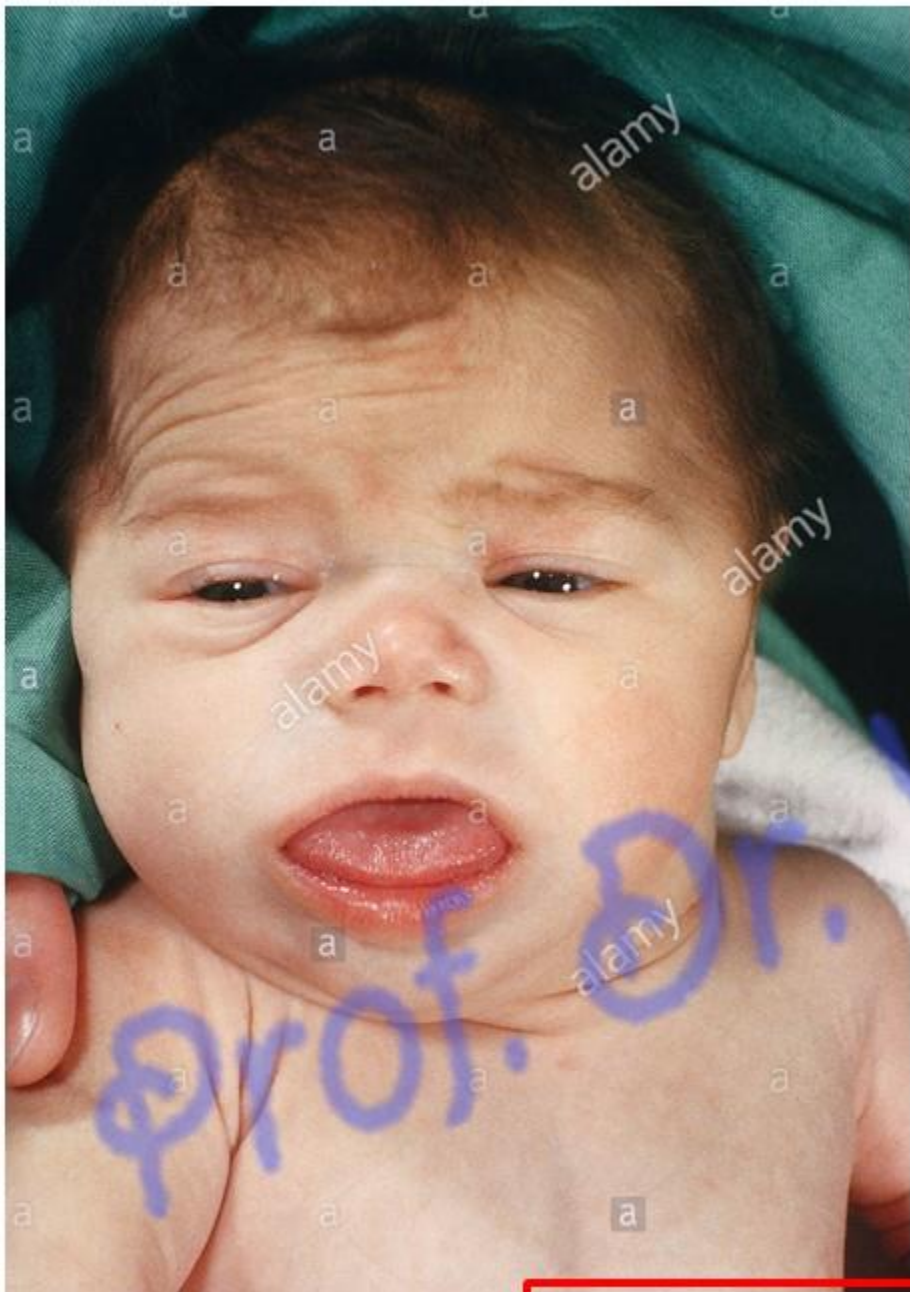
thyroglossal duct  
In the neck

Lobe of thyroid gland.

- The **cavities of 2 sacs** become filled with cells derived from their wall to form the **2 thyroid lobes and isthmus.**
- The 4<sup>th</sup> pharyngeal pouches gives parafollicular C-cells.

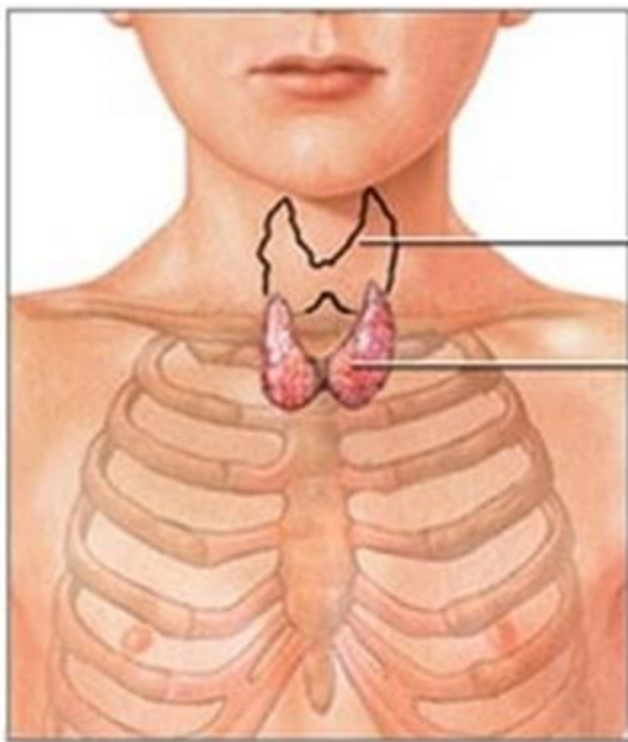


- a- The proximal part of the thyroglossal duct is degenerated.
- b- The distal part of the duct persists as fibrose cord called **levator glandulae thyroidea** that attached to the hyoid bone.
- c- The cells at the distal end of the duct proliferate to form **pyramidal lobe**.



**\*\* Congenital anomalies of the thyroid gland:**

- **A genesis**, failure of development leading to **cretinism**.
- **Hypogenesis**, small gland leads to **cretinism**.



Normal location  
of thyroid gland

Retrosternal  
thyroid



**\*\* Congenital anomalies of thyroid gland:**

- **Ectopic thyroid;** It founds at any site rather than its normal site;
- **Lingual thyroid:** due to failure of descend.
- **Retrosternal** (behind the sternum): due to excess descend of the gland.

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- **Abnormalities of the thyroglossal duct:**

- a- Persistence of the proximal part

- b- **Thyroglossal cyst:** part of the thyroglossal duct dilated.

- c- **Thyroglossal sinus:** rupture of the cyst in front of neck.



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[dr\\_youssefhussein@yahoo.com](mailto:dr_youssefhussein@yahoo.com)

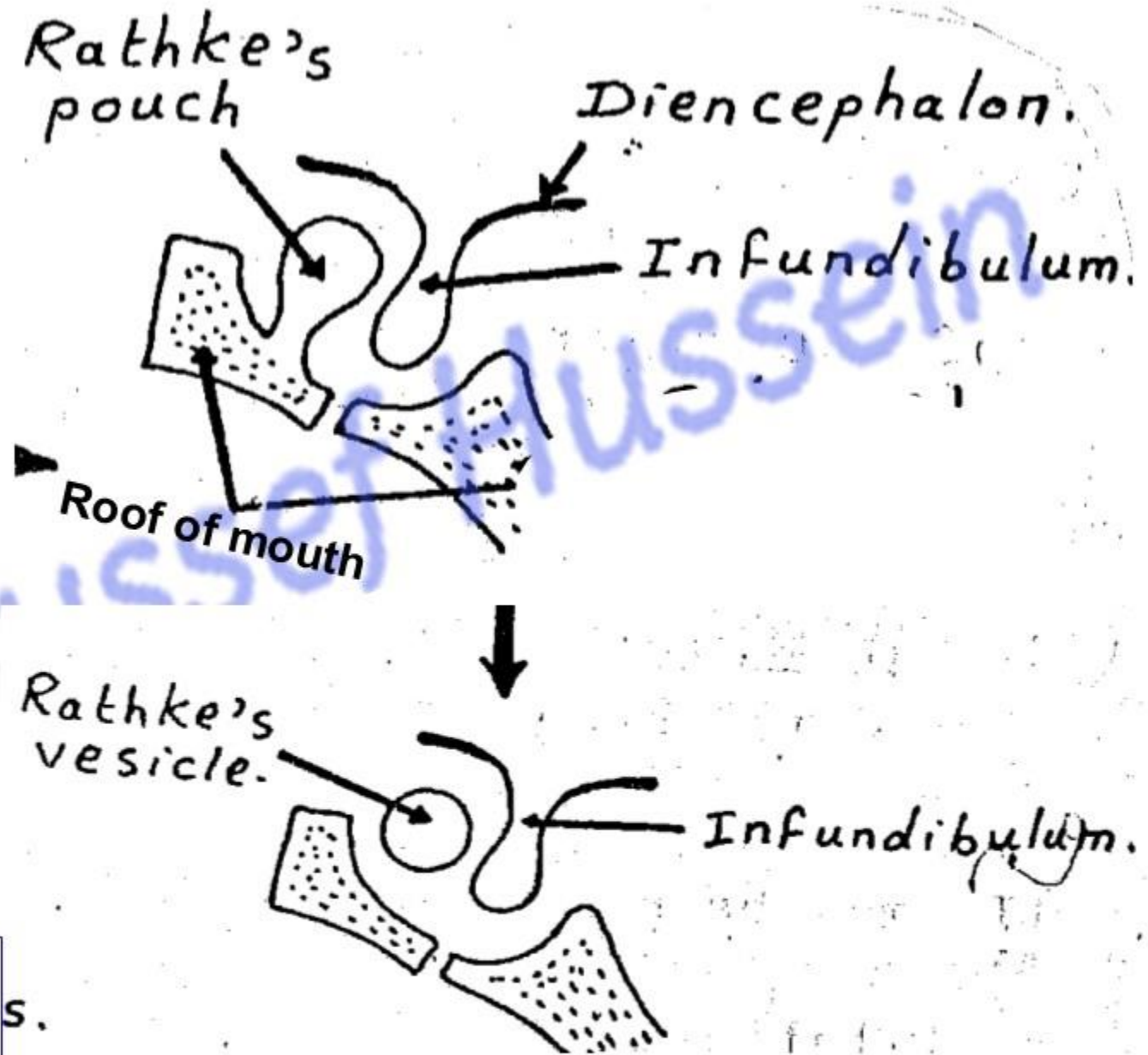
# Development of pituitary gland

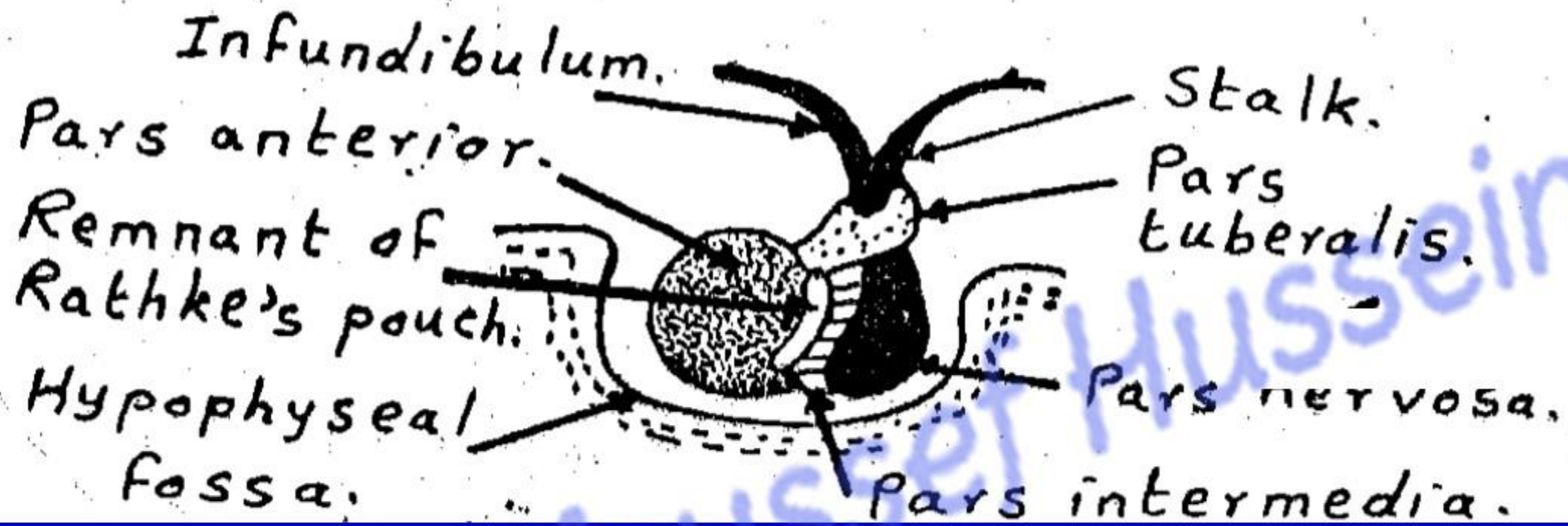
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\* A small diverticulum projects downward from the diencephalon (neural ectoderm) called **Infundibulum** (ectoderm).

- A small pouch projects upward from the roof of the primitive mouth in front the infundibulum called **Rathke's pouch** (ectoderm).

- The pouch separated from the roof of the mouth called **Rathke's vesicle** or cyst





a- Distal part of infundibulum dilates and later on becomes solid to form **posterior lobe (pars nervosa, neurohypophysis)**

b- Proximal part remains open and forms **pituitary stalk.**

- **Anterior wall** of the **Rathke's cyst** proliferates rapidly and becomes thick forming **anterior lobe (pars anterior, adenohypophysis)**

- **The posterior wall** grows slowly forming **Intermediate Lobe (Pars Intermedia).**

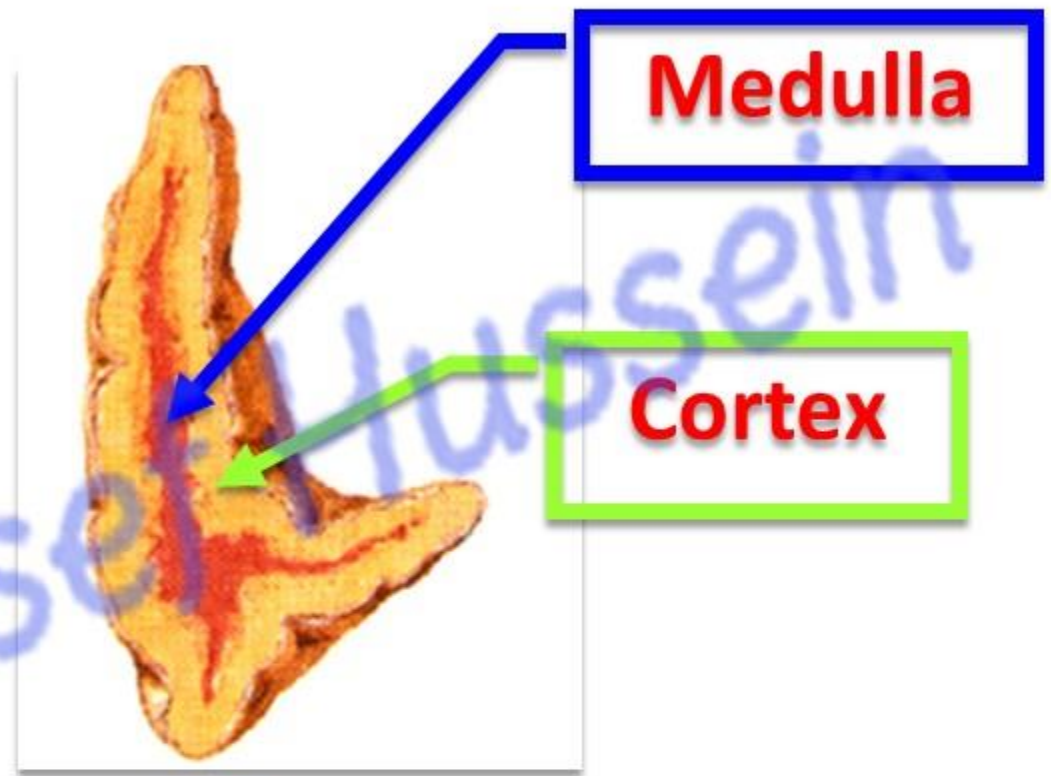
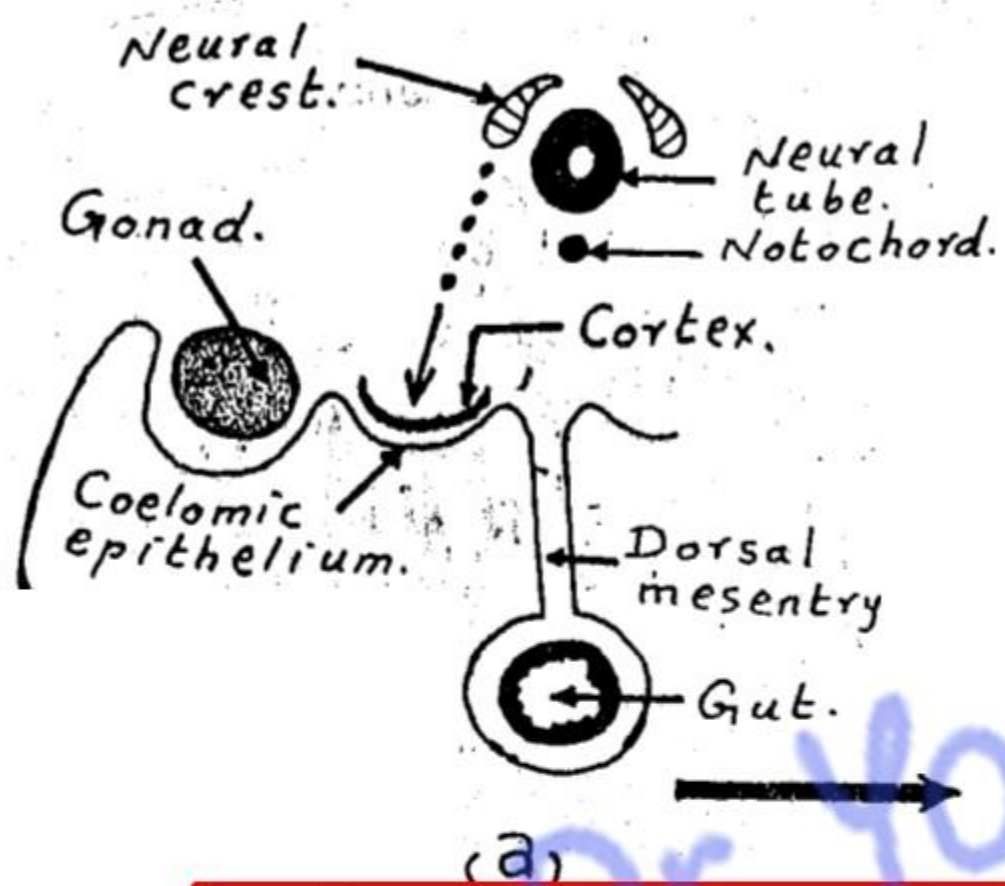
## Congenital Pituitary Anomalies

- **Agenesis/Aplasia:** The complete absence of the pituitary gland, a rare and severe condition.
- **Hypoplastic Anterior Pituitary:** An under-developed, small anterior pituitary gland, which is the most common anomaly causing hormone deficiency.
- **Ectopic Posterior Pituitary:** The posterior pituitary gland does not descend to the sella turcica.
- **Duplication of the Pituitary Gland:** An extremely rare condition.
- **Pituitary Stalk Interruption Syndrome (PSIS):** Characterized by a thin or absent pituitary stalk, ectopic posterior pituitary, and hypoplastic anterior pituitary.
- **Rathke Cleft Cysts:** Remnants of the embryological Rathke's pouch that can enlarge and cause compression of the pituitary



# Development of Suprarenal gland

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- **DEVELOPMENT OF SUPRARENAL GLANDS**

- \*\* **The cortex** (mesoderm) : from **coelomic epithelium**

- \*\* **The medulla** (ectoderm) **from neural crest.**

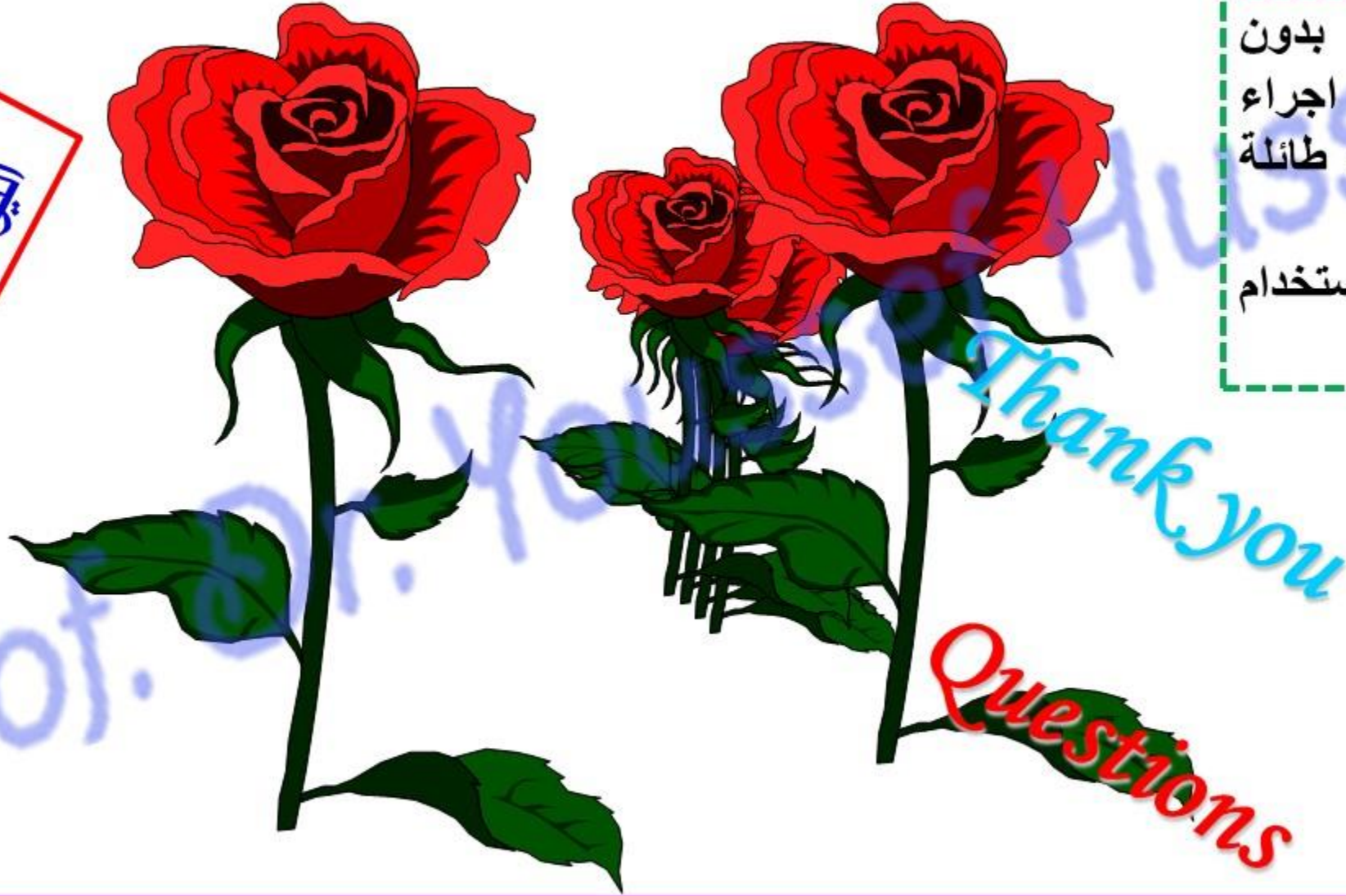
- **Congenital anomalies**

- **Congenital Adrenal Hyperplasia (CAH):** Rare, detected at birth or infancy due to ambiguous genitalia in females or adrenal crises (vomiting, dehydration, hypotension) in both sexes
- **Horseshoe Adrenal:** A rare fusion of the left and right adrenal glands, often seen with other abdominal anomalies, such as renal or central nervous system defects.
- **Adrenal Agenesis/Hypoplasia:** Complete absence or underdevelopment of the adrenal glands, often fatal or associated with severe developmental defects, including anencephaly.
- **Ectopic Adrenal Tissue:** Adrenal tissue found in abnormal locations, typically in the adrenal-renal ridge, pelvis, or along the descending path of gonads.

[https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd\\_cn0PQ](https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd_cn0PQ)

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Thank You  
Questions

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