

### Muscular Triangle, and visceral space

This part of neck contains the thyroid gland. Decisions related to type of anesthesia and dental procedures are usually affected by disease of Thyroid gland. Therefore, Dentists must be familiar with anatomy of this part.

### **Objectives**

**By the end of this lab students are expected to be able to**

1. Describe the boundaries, roof, floor and content of muscular triangle
2. Discuss the formation, course and termination of anterior jugular vein
3. Compare the location of the 4 infrahyoid muscles.
4. Identify different parts of thyroid gland and their related structures
5. List the three arteries and veins of the thyroid gland.
6. Locate the parathyroid glands
7. Discuss the structure, location and relation of trachea and esophagus

### **Lab check list**

#### **A- Muscular Triangle**

- Boundaries
  - Anterior: Anterior median line, from hyoid bone to suprasternal notch.
  - Posterosuperior: Superior belly of the omohyoid.
  - Posteroinferior: Anterior border of sternocleidomastoid.
- Roof
  - Investing layer of deep cervical fascia.

**Note:** Anterior jugular vein lies within superficial fascia over the roof.
- Floor (pretracheal fascia covering 3 muscles)
  - Sternothyroid
  - Sternohyoid
  - Thyrohyoid.

#### **B- Visceral space**

1. Thyroid gland
2. Parathyroid gland
3. Trachea
4. Esophagus

#### **1- Thyroid gland**

- Parts and Features
  - Right and left Lobes
    - Apex and Base
    - Lateral (superficial) surface
    - Medial surface
    - Posterior (posterolateral) surface
  - Pyramidal lobe
  - Isthmus
  - Levator glandulae thyroideae
- Relations
  - Relations of the Lobes
  - Relations of the Isthmus

- Blood Supply
  - Superior thyroid artery
  - Inferior thyroid artery
  - Thyroidea ima

**Anatomy jewel:** Enlarged Thyroid may extend backward, compressing the adjacent structures without forming a visible swelling on the front of the neck.

**Anatomy jewel:** Thyroid gland moves up and down during swallowing. Thus thyroid swellings can be distinguished clinically from other swellings in the region of the neck.

## 2- Parathyroid Glands (4)

- Location
  - Closely related to the posterior border of the thyroid gland (within its fascial capsule)
  - Two superior and two inferior
- Blood Supply
  - Superior and inferior thyroid arteries.

## 3- Trachea (Cervical part)

- Start : C6
- C-shaped rings (D-shape)
- Trachealis muscle
- Relations:
  - Anterior:
    - Anterior jugular veins and jugular venous arch
    - Isthmus of thyroid 2<sup>nd</sup>-4<sup>th</sup> tracheal rings
    - Thyroidea ima and inferior thyroid veins
    - Sternothyroid and Sternohyoid
  - Posterior:
    - Esophagus
    - Recurrent laryngeal nerve.
  - On each side:
    - Lobe of thyroid gland
    - Carotid sheath.

## 4- Esophagus (Cervical part)

- Extent: from pharynx to stomach
- Start: C6
- Relations
  - **Anterior:**
    - Trachea
  - **Posterior:**
    - Prevertebral fascia
  - **Lateral:**
    - Lobe of the thyroid gland
    - Carotid sheath

**Exercise:**

Q1: Identify the pointed structures

A).....

B).....

C).....

D).....

E).....

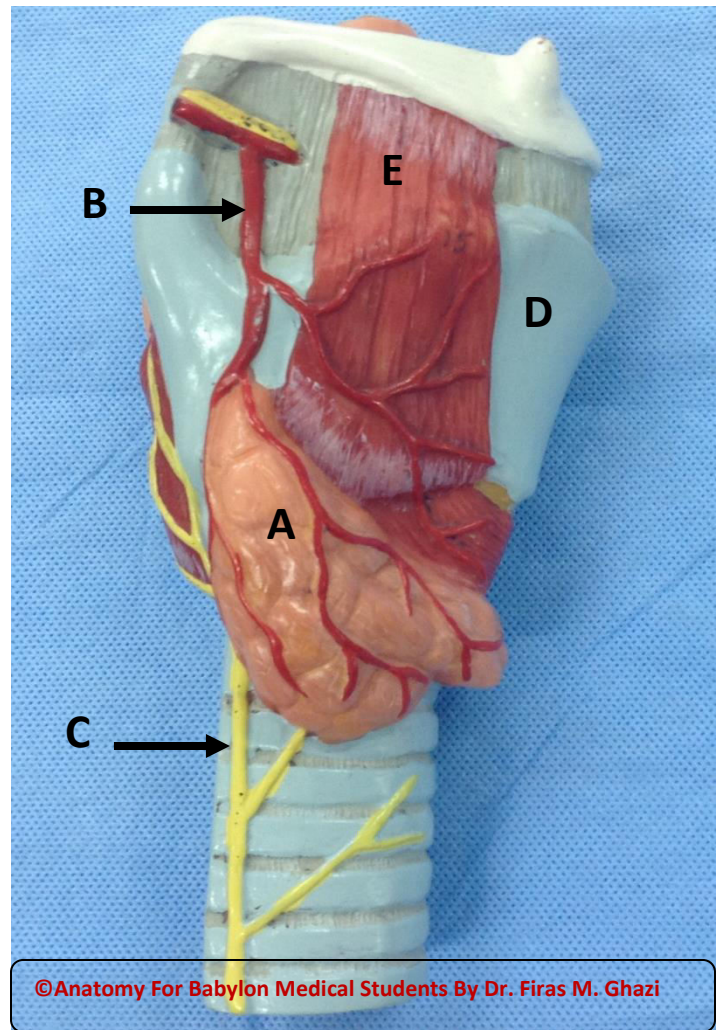
Q2:

1- The upper border of (D) is at level of .....

2- The main function of (A) is.....

3- (B) is a branch of.....

4- Injury to (C) results in .....



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