**\*ANATOMY \* ANTERIOR TRIANGLE \* LEC.14**

* **Introduction:**- A wrongly lost content of submandibular triangle is “submandibular ganglion”.
- Names related to submandibular triangle : - glandular triangle
 - digastrics triangle
- **submandibular gland:** 🡪 divided into 2 parts, because it wraps itself around the posterior free border of the mylohyoid muscle.
 🡪page #2: notice the medial view of right half of the mandible , showing:
 - hyoid
 - mylohyoid
 - submandibular wrapping around the posterior border of mylohyoid

 🡪 submandibular gland lies within the floor of the oral cavity, so it’s duct will go to both side of the frenulum of the tongue

 - **submandibular duct**:
 🡪 page #3: medial view of right side of the mandible:
 - the duct emerges from anterior aspect of the DEEP part
 - continues at the floor of the mouth
 - then opens at both sides of the frenulum of the tongue

 - **Hyoglossus muscle:**

 - page #5: notice : 🡪the “LIM” of the duct relations
 🡪 lingual nerve
 🡪 deep part of hyoglossus that is crossed by the **hypoglossal nerve**.
 🡪 genoglossus is deep to hyoglossus
 🡪 **note**: “glossus” is a suffix that related to the tongue

 - page #6: notice: 🡪 hyoglossus
 🡪 hyoid
 🡪 tongue
 🡪 deep lingual artery
 🡪 hypoglossal nerve
 🡪 lingual vein
 🡪 lingual artery
 - hyoglossus muscle inserts itself on the lateral side of the tongue
 - hypoglossal nerve supplies ALL muscles of the tongue EXCEPT one coming from palate “palateglossus”
 - Action: increase the space of floor of the tongue while eating, DEPRESS TONGUE

 - which is lateral to hyoglossus: 1. Hypoglossal nerve
 2. Submandibular gland
 3. Lingual nerve
 4. Deep part of submandibular gland

 - which is deep to hyglossus: 1. Lingual artery
 2. Lingul vein ,,, in the slide, it is divided into large superficial to it
 and small deep part to it. "احنا بنعتمده deep"

 🡪 **page #8**: cross section at the level of the first molar:
 -- NOTICE:
 - deep part of submandibular gland isn’t shown , only the duct
 - body of the mandible: \*mandibular foramen
 \* mandibular canal and it’s content
 \* deep to it is the **deep part of submandibular gland**:
 🡪 **relations**: 1. Facial vein 🡪 superficial
 2. Facial artery 🡪 deep
 - mylohyoid muscle, nerve, vessles
 - **hyoglossus muscle**:
 🡪 between the hyoglossus and mylohyoid “external to hyoglossus”/ “lateral relations”:
 1. Deep part of submandibular gland “mainly”
 2. Submandibular ganglion
 3. Submandibular duct
 4. Lingual nerve
 5. Hypoglossal nerve

 🡪 deep relations… add “lingual VEIN”
 🡪 so the relations from deep to out: 1. Genioglossus
 2. Hyoglossus
 3. mylohyoid

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 🡪 **Carotid Triangle**:
 - also named “vascular triangle”: most of the structure are vascular.
 - bonded posteriorly by **anterior** border of the sternocleidomastoid.
 - page #10: notice: - boundaries
 - contents
 - the sternocleidomastoid is reflected to show the “accessory nerve”.
 - cervical lymph nodes : **drains** : **1. Submental
 2. Submandibular
 3. Carotid

 - anterior triangle of the neck: 🡪 skin🡪 superficial fascia🡪 deep fascia** **-** **made a slink called “carotid sheath”
 - so carotid sheath is a tubular extention of deep cervical facia
 - contents of the sheath:**
1. CCA🡪 common carotid artery “below the sheath/lower part of sheath”
2. ECA🡪 external carotid artery “in the upper part of the sheath”
3. ICA 🡪 internal carotid artery “in the upper part of the sheath”
4. Internal jugular vein “ found within MOST of the sheath/ most of the way”

**- NOTES:** 🡪 sternoclavicular joint is an important clinical landmark.
 🡪 ECA passes deep to digastrics posterior and stylohyoid muscles, which will divide it according to branches (5 branches below and 3 branches above).

🡪 ICA : - ascend vertical in the neck
 - enters catotid OPENING that lead to carotid CANAL “within **petrous** bone”
 - it will enters the floor of the middle cranial fossa through “foramen **lacerum**”
 - then, it will pass on both sides of body of sphenoid within a cave called “**cavernous sinus**” **Where arterial blood is pathing inside venous blood .**

Some American Ladies Found Our Petra So Magnificent

 **-**  then, at the **anterior clenoid process**, it will appear up as cerebral artery giving branches .
 - before giving these 2 branches, it will give a branch that passes the optic canal, called “ophthalmic artery”
 - left anterior + right anterior cerebral artery 🡪 anterior communicating artery
 - middle + posterior cerebral artery 🡪 posterior communicating artery
 - by these communication, we complete circle of WILLIS.
 - ICA supplies the anterior part of the cerebrum “**frontal and parietal lobes**”
 - **Branches :**
 🡪 at cervical part : no branches
 🡪 at cavernous part : no branches
 🡪 at cerebral part : - 3 branches : 1. Ophthalmic anteriorly
 2. Anterior cerebral
 3. Middle cerebral

 - “S”🡪 ???

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* **Page #16**:
- Notice: - midline of the neck
 - internal jugular vein
 - omohyoid muscle

- Notes:
 - internal jugular drains finally into the subclavian vein subclavicularly
 - jugular vein united with sublavian vein to give “brachiocephalic vein”
 - Right brachiocephalic + Left brachiocephalic veins 🡪 superior vena cava
 - Internal jugular vein starts as a continuation of SIGMOID sinus, at the jugular foramen
 - AT IT’S END: at the distal end of mr. internal jugular vein has a valve “bicuspid valve”,
 forming a dilatation called “inferior bulb”. 🡪 this is the only and only and
 only valve in heas and neck ☺
 - internal and external jugular veins are clear while being nevous “a36eeha 6oo$eh :p”
* **Hypoglossal nerve:** - remember that branch from C1 descends from it “within anterior triangle”
 - it changes it’s direction, entering the submandibular triangle
- so it pases below the bridge 2 times : - enter and exit
- **C1 IS MOTOR, IS FOUND ANTERIOR NOT POSTERIOR**
* **Ansa cervicalis**:
 - hitchhiking the hypoglossal nerve
 - it’s overriding internal jugular vein (wrapping itself)
 - roots : 1. Superior 🡪 anteriorly
 2. Inferior 🡪 posteriorly
- supplies All strap muscles of the neck EXCEPT one
* **Vagus nerve:**
 - leaves the skull via jugular foramen with accessory nerve close to it
- has 2 ganglia : 1. Superior
 2. Inferior
- at the right side, vagus nerve will give the right laryngeal nerve **AT** right subclavian artery.
- Right laryngeal nerve gives/ supplies muscles of the larynx and some of the pharynx.
- left laryngeal nerve loop below aortic arch and ascends between trachea and esophagus
- left laryngeal nerve will supply muscles of the larynx EXCEPT cricothyroid.
- so, laryngeal nerves are continuation of the cranial root of accessory nerve.

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# hope every thing is OK
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