

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

كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

Prof. Dr. Youssef Hussein Anatomy - YouTube

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Scalp

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<https://www.youtube.com/@ProfDrYoussefHusseinAnatomy/playlists>

Eye brows

Superior temporal line

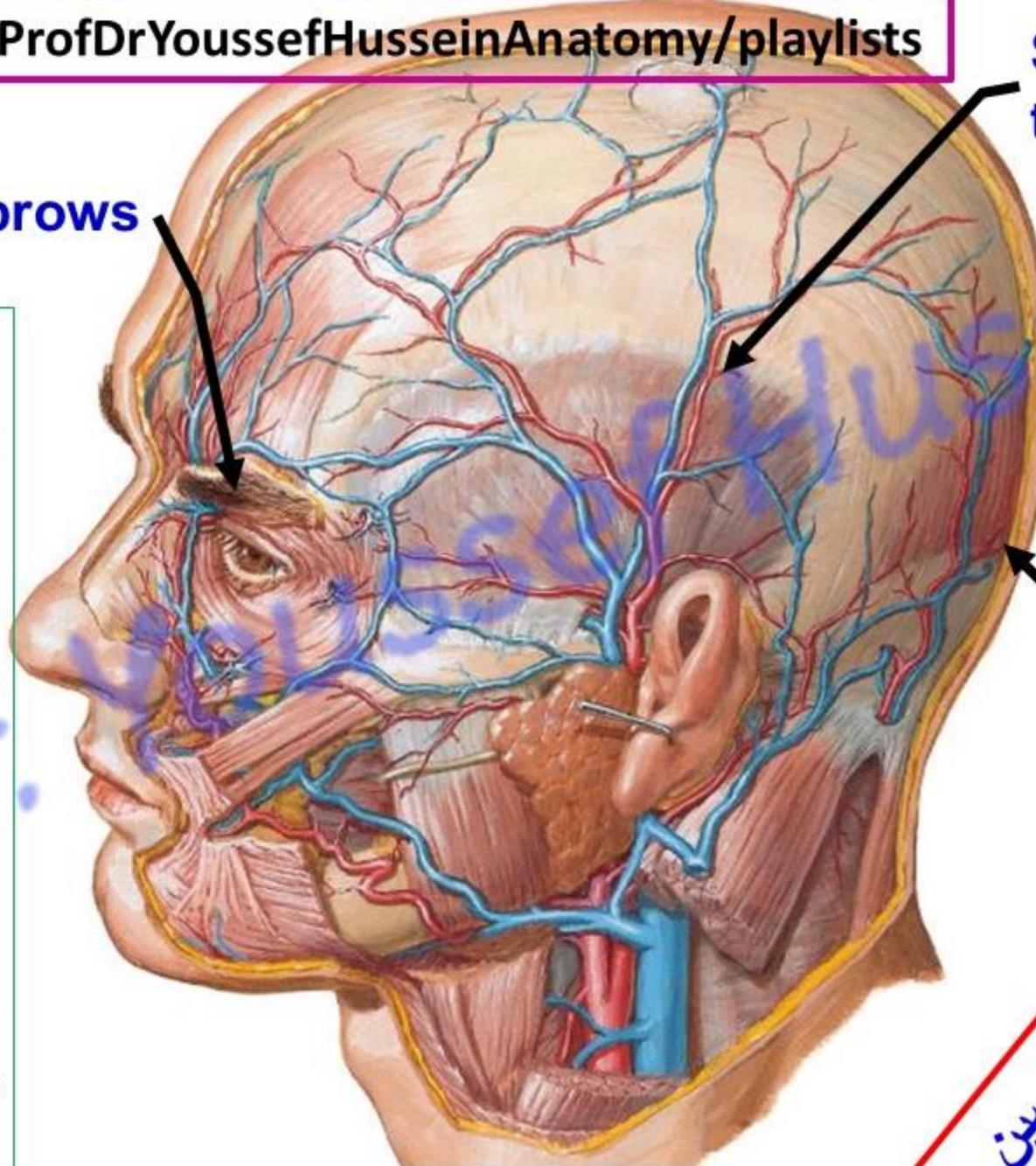
External occipital protuberance

- **Scalp**

- The soft tissues covering skull cap (calvaria).

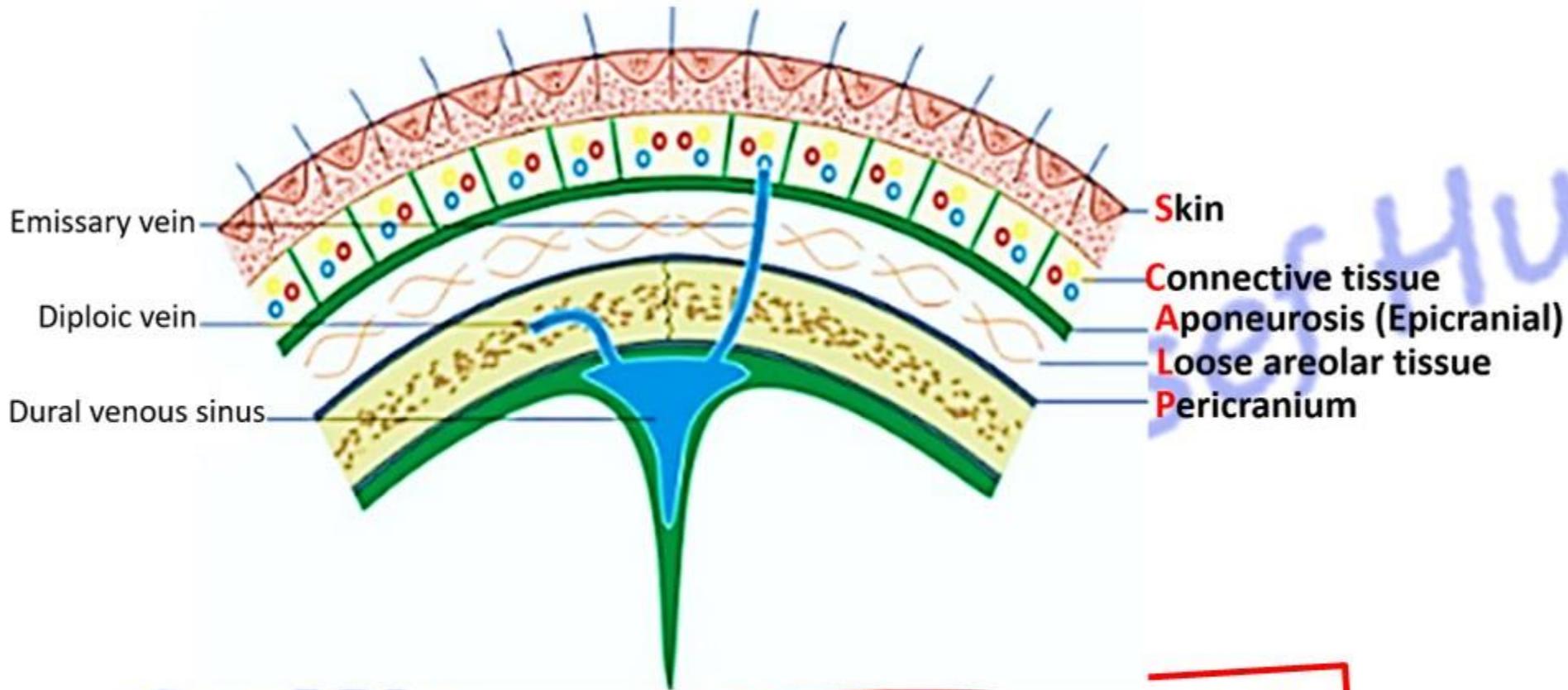
- **Extension**

- **Anteriorly;** Skin of the eyebrows.
- **Laterally;** superior temporal lines.
- **Posteriorly;** external occipital protuberance and **highest** nuchal lines.



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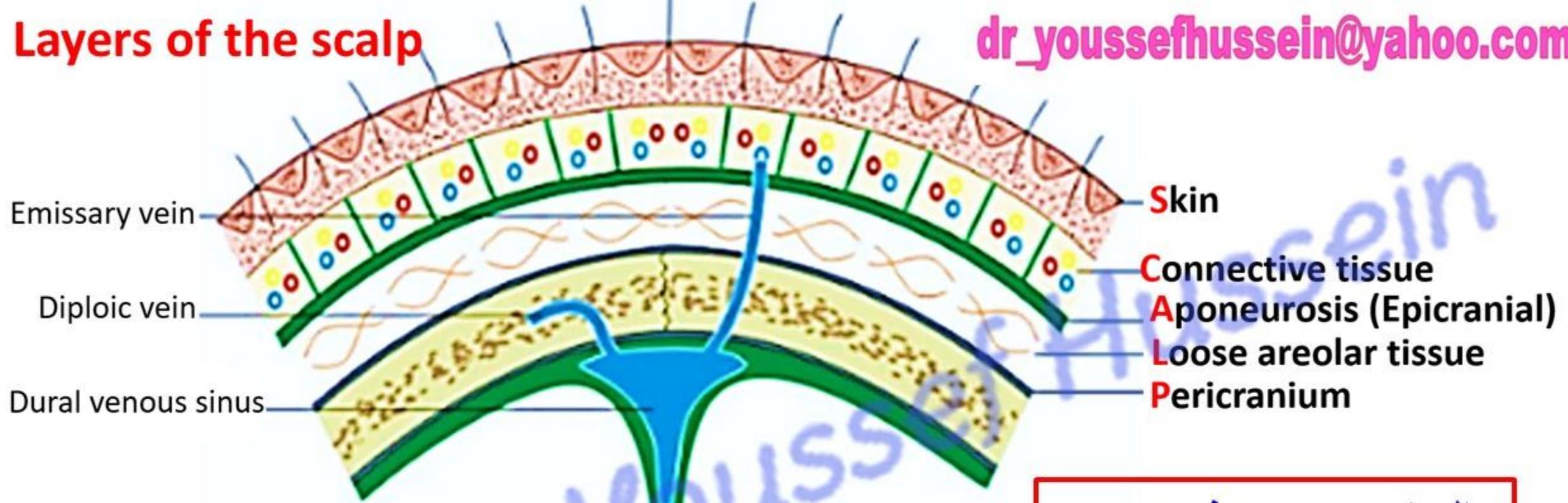
Layers of the scalp : 5 layers (S.C.A.L.P.)



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Layers of the scalp

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1- Skin: thick, tough and rich in hair follicles, sweat and sebaceous glands.

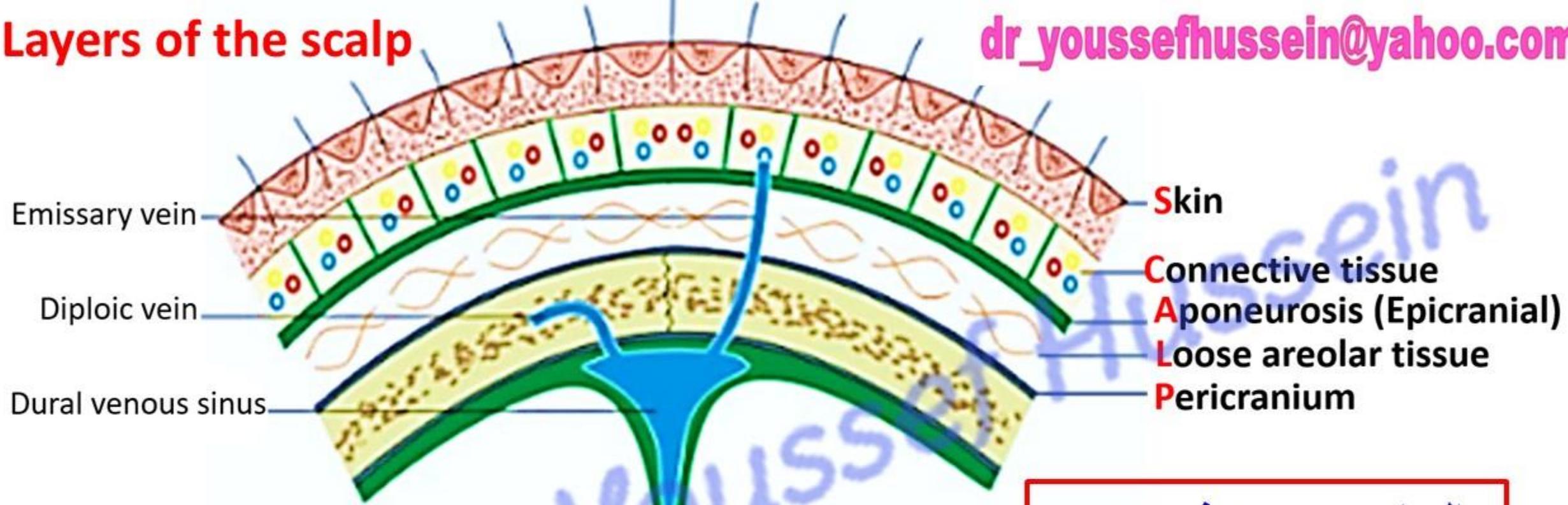
2- Connective tissues: formed of **dense fibrous tissue**, contains blood vessels, nerves and lymphatic.

3- Aponeurosis of occipitofrontalis muscle (*galea aponeurotica*).

- The first 3 layers **attached together** and move on the underlying layer.

Layers of the scalp

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4- Loose areolar tissue (dangerous zone): allows **mobility** of the scalp on the skull, site of collection of pus and blood

5- Pericranium (periosteum): it does not adhere to the skull bones but adherent at the **sutures** of the skull by band of the fibrous tissue called **sutural ligaments**.

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Occipitofrontalis muscle

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**I. Epicranial
aponeurosis**

Occipitofrontalis Muscle

Frontal belly

Occipital belly

**O. Skin of the
eye brow and
root of the
nose**

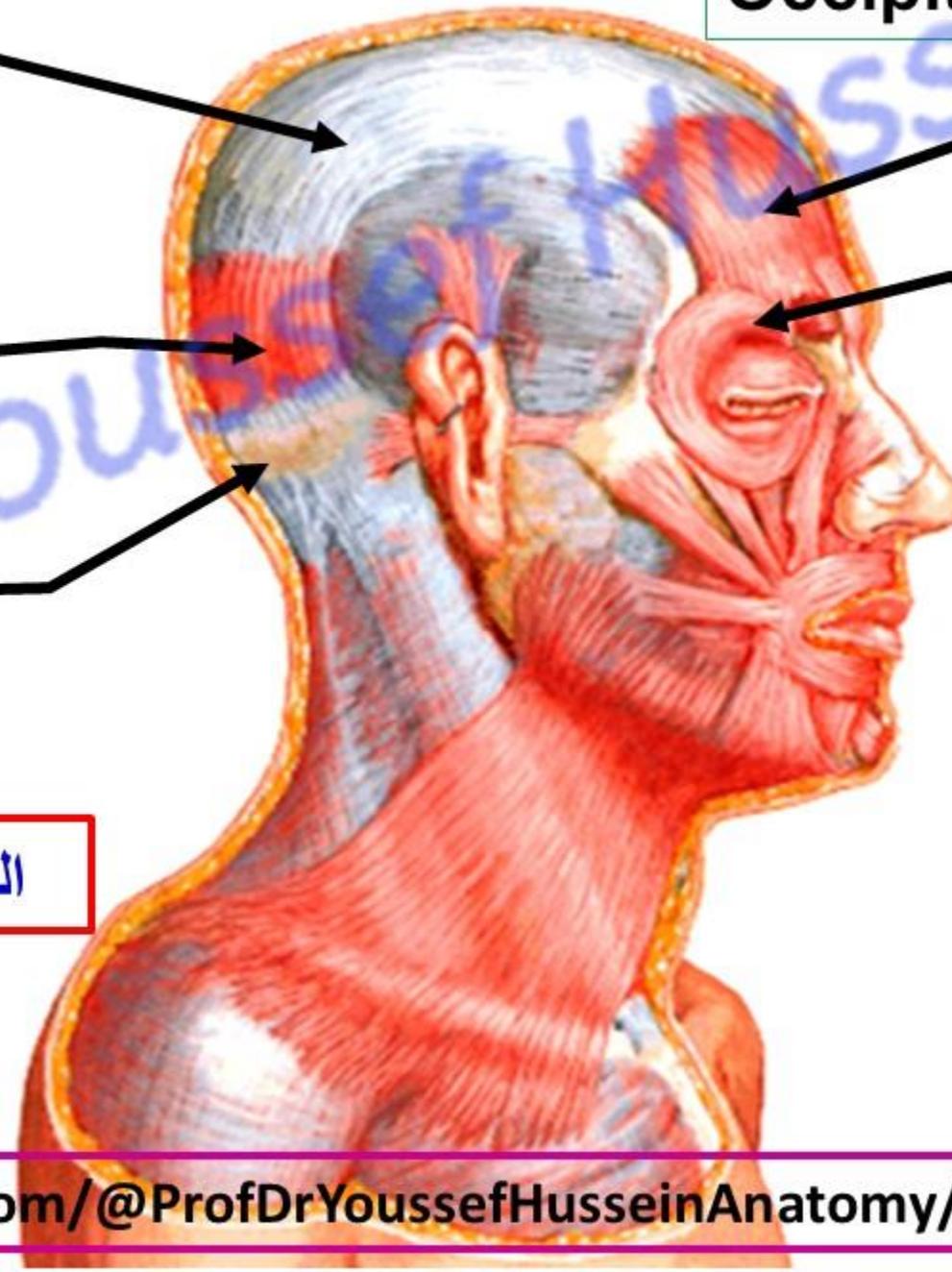
No bony attachment

**Nerve supply is facial
nerve (2nd pharyngeal
arch)**

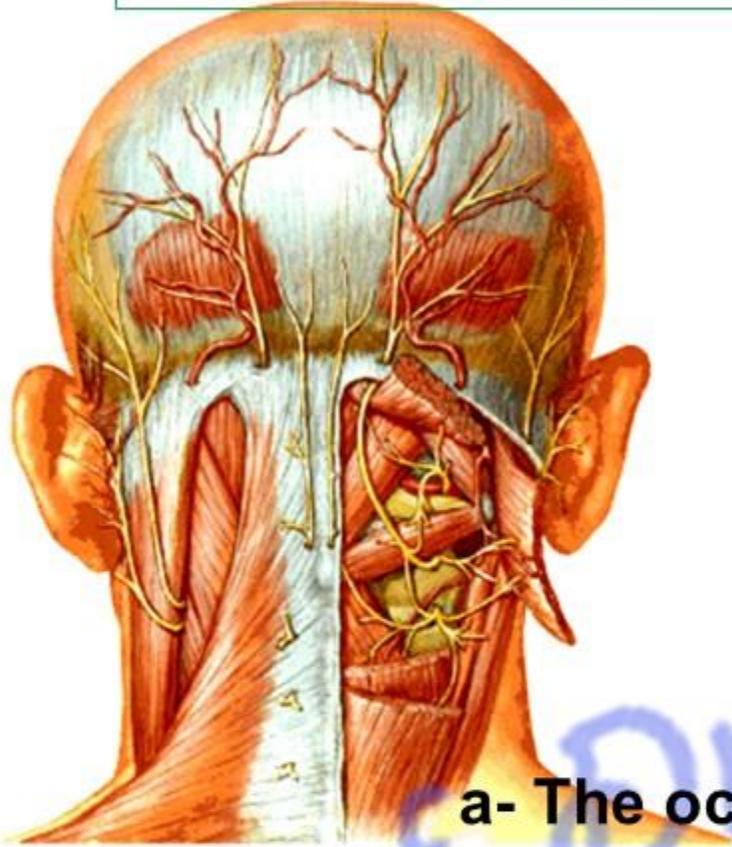
**O. Highest
nuchal line**

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Occipital bellies



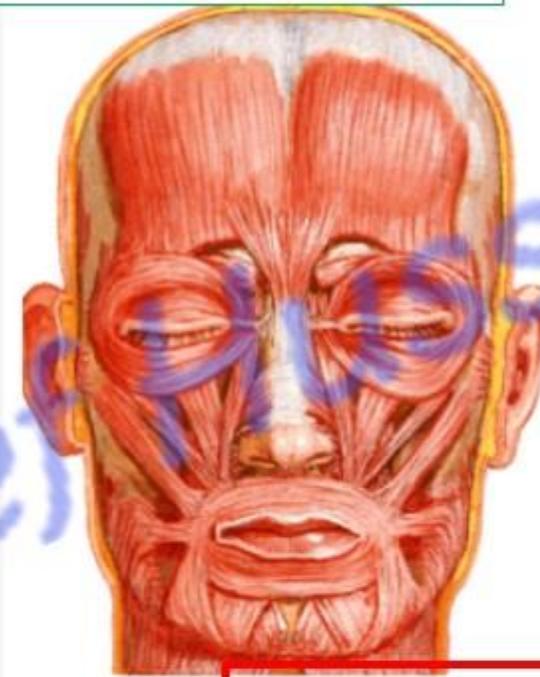
a- The occipital bellies

* Nerve supply, posterior auricular branch of facial nerve.

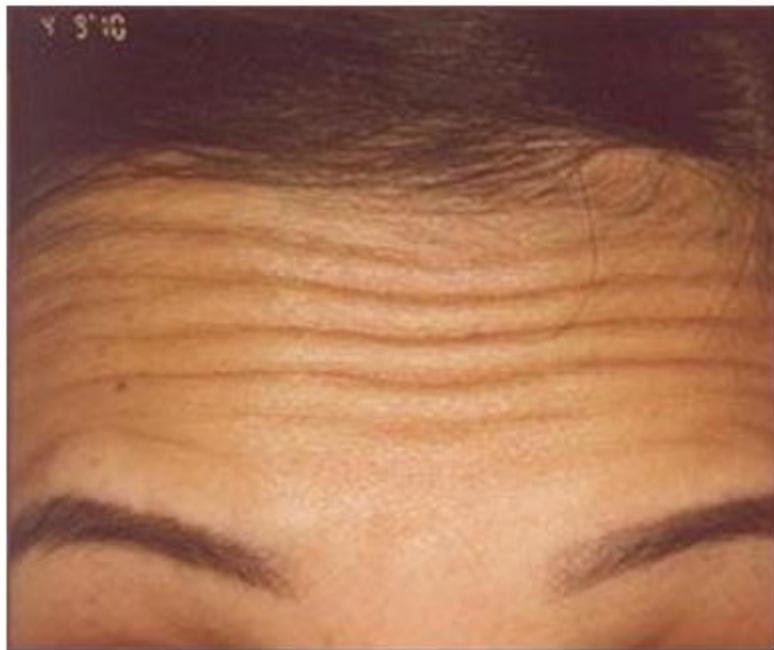
b- The frontal bellies

* Nerve supply; temporal branches of the facial nerve.

Frontal bellies



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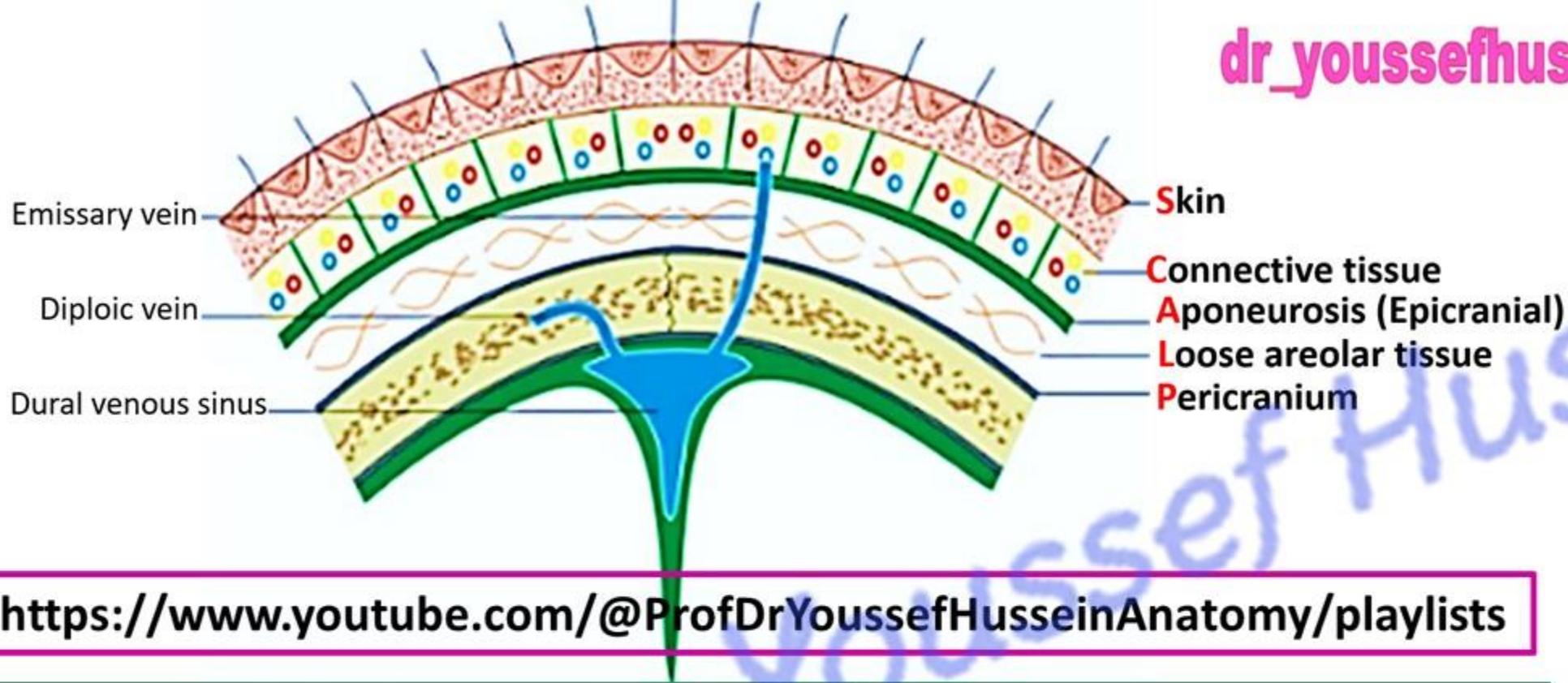
*** Action of frontal belly**
- Elevate the eye brows producing transverse wrinkles of skin of the forehead (*expression of surprise*).



*** Action of occipital belly**
- Pull the scalp backward leading to smooth skin of forehead.

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- The first 3 layers attached together and move on the underlying layer.

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- Bleeding under the first 3 layers forms diffuse hematoma extending throughout the scalp and reach the upper eye lids (Black eye).

- Fracture of the skull bone produces a localized hematoma because the periosteum is firmly attached to the sutures.



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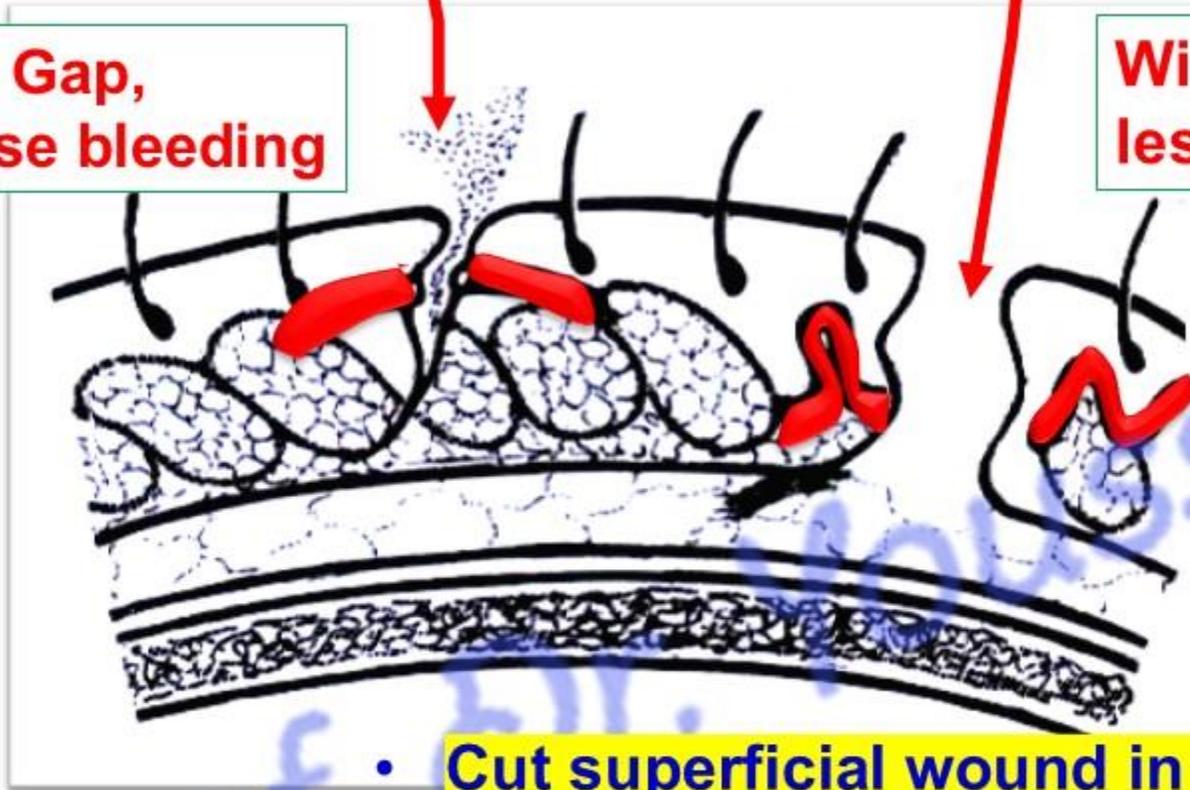
Cut wound in subcutaneous area

Cut wound involving epicranial aponeurosis



Small Gap,
Profuse bleeding

Wide Gap,
less bleeding



Horizontal Cut wound of The front of scalp leading to Wide Gap due to **retraction** of occipitofrontalis muscle

- **Cut superficial wound in subcutaneous area**

- **Profuse bleeding:** The connective tissue is dense fibrous and adherent to the wall of the blood vessels so prevents their contraction or retraction following injury., The arteries supplying the scalp anastomose freely with each other.

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Nerve supply of scalp

- Scalp is supplied by 10 nerves on each side.
- **Five nerves in front the auricle**
- **Fives nerves behind the auricle.**
- **Each 5 nerves, 4 sensory and 1motor.**

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Nerves in front auricle

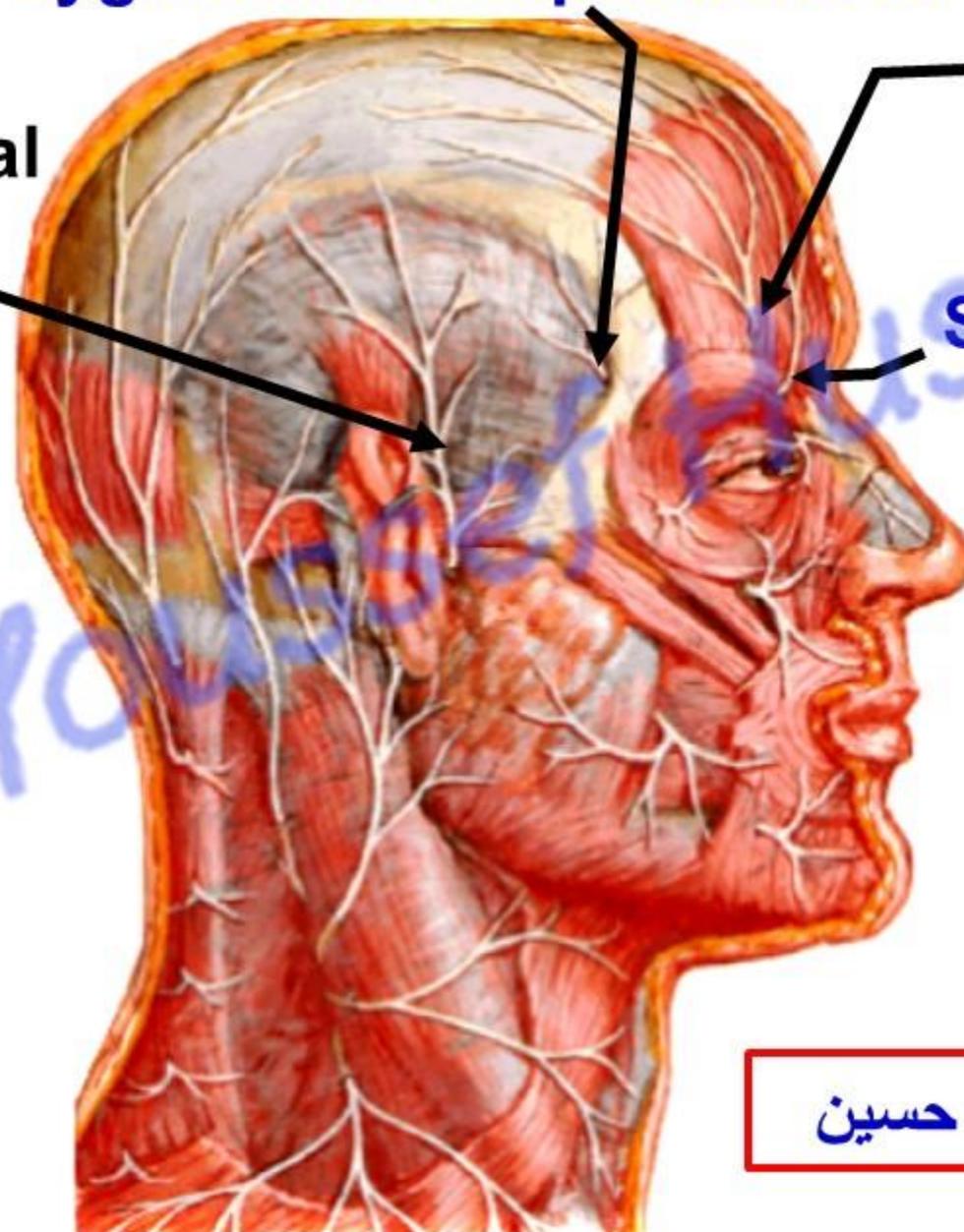
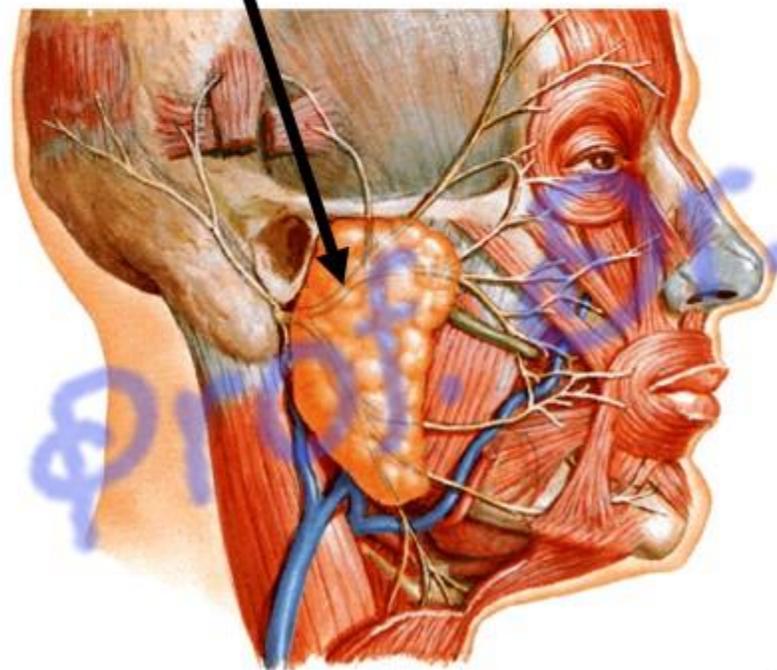
Auriculotemporal nerve S

Temporal nerve M

Zygomaticotemporal nerve S

Supraorbital nerve S

Supratrochlear nerve S



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A- Nerves in front the auricle

A- Branches of the ophthalmic nerve (frontal nerve).

a. Supratrochlear nerve (Sensory): supplies the medial part of the upper eye lid and forehead

b. Supraorbital nerve (Sensory): supplies the middle part of the upper eye lid and forehead

B- Branch of the maxillary nerve (Zygomatic).

- **Zygomaticotemporal nerve (Sensory)** supplies temporal area

C- Branch from the posterior division of the mandibular nerve.

Auriculotemporal nerve (Sensory) enters the parotid gland and leaves it through the upper end to the scalp supplies temporal area

D-Temporal branch of the facial nerve (motor):

- It supplies **frontal** belly of occipitofrontalis muscle.

N>B: Sensation from the trigeminal 5th while motor from the facial N 7th

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Nerves behind auricle

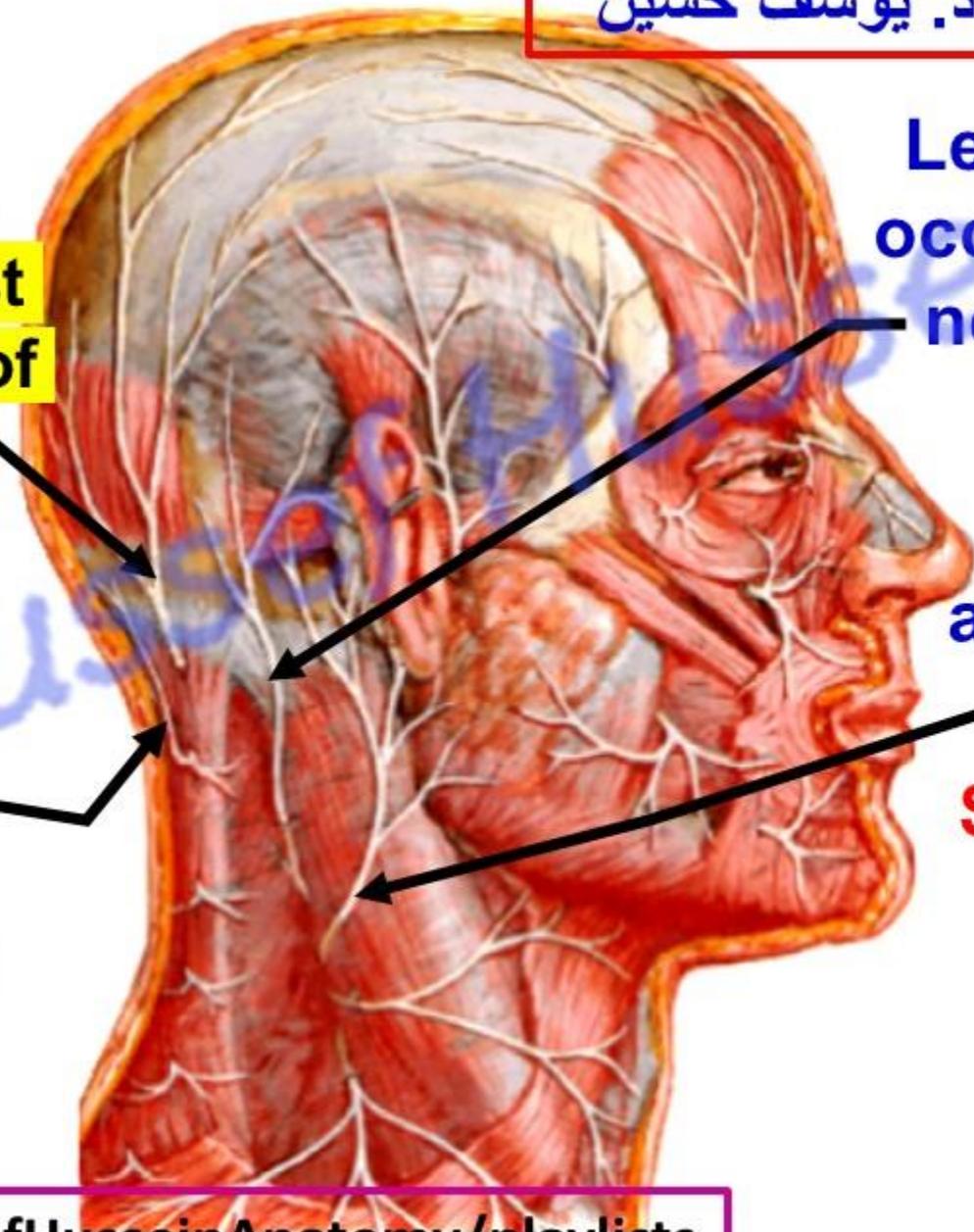
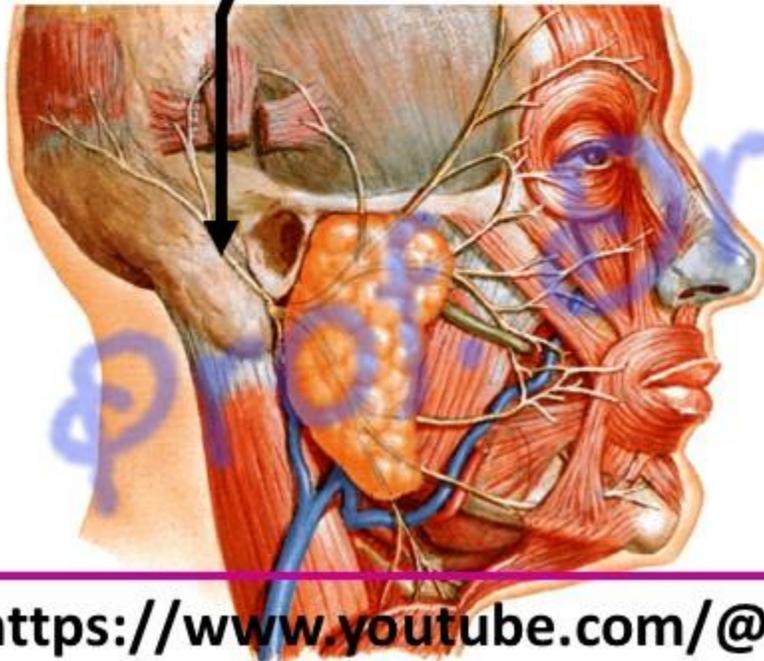
S=C2 Greater occipital nerve
The thickest cutaneous nerve of the body

Posterior auricular nerve
M

3rd occipital nerve
S=C3

Lesser occipital nerve
S=C2

Great auricular nerve
S=C2&3



Blood supply of scalp

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- The scalp is supplied by **5 arteries** on each side.
- **3 in front** of the auricle
- **2 behind** the auricle

Posterior Auricular artery

occipital artery

External carotid artery

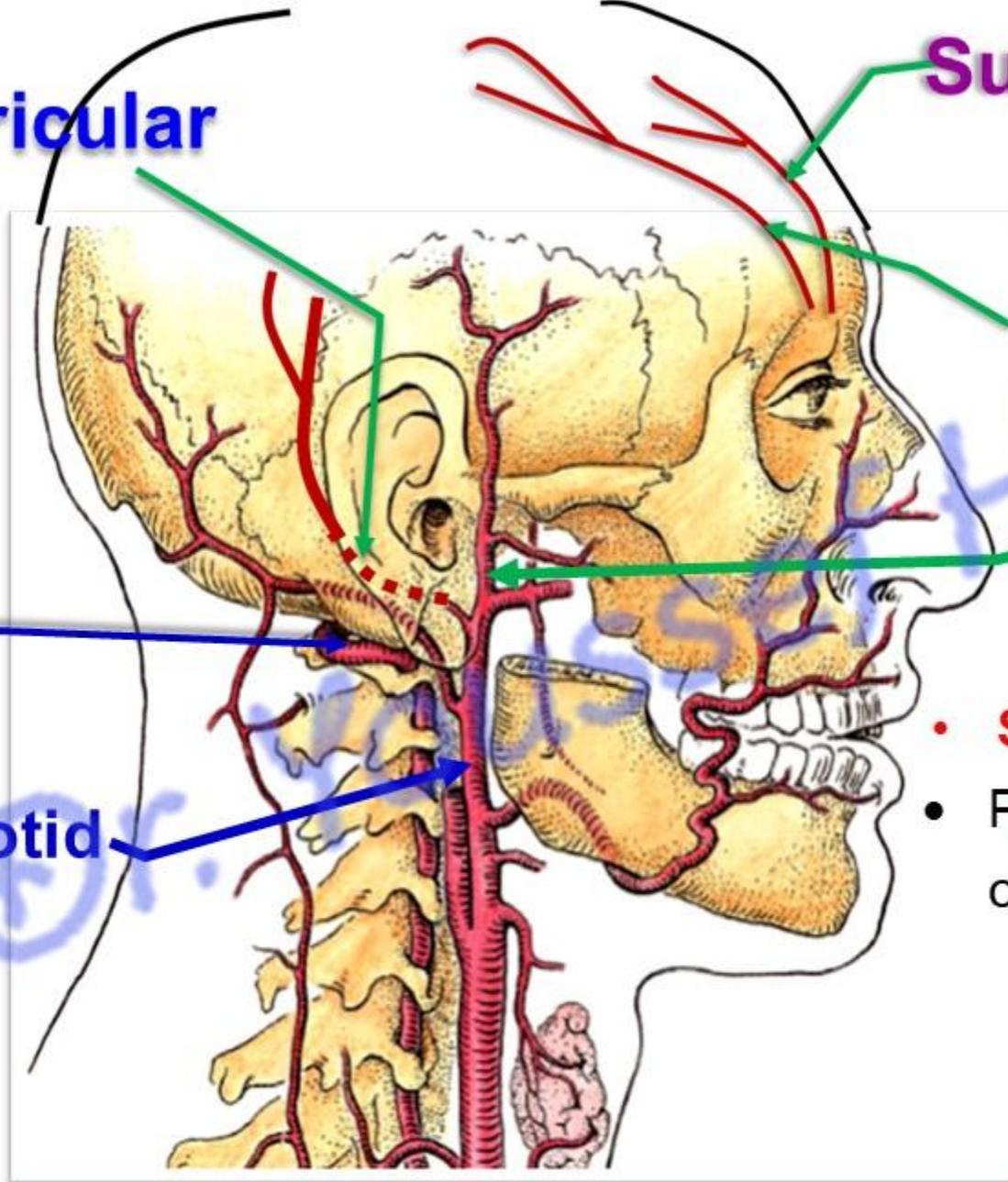
Supratrochlear artery

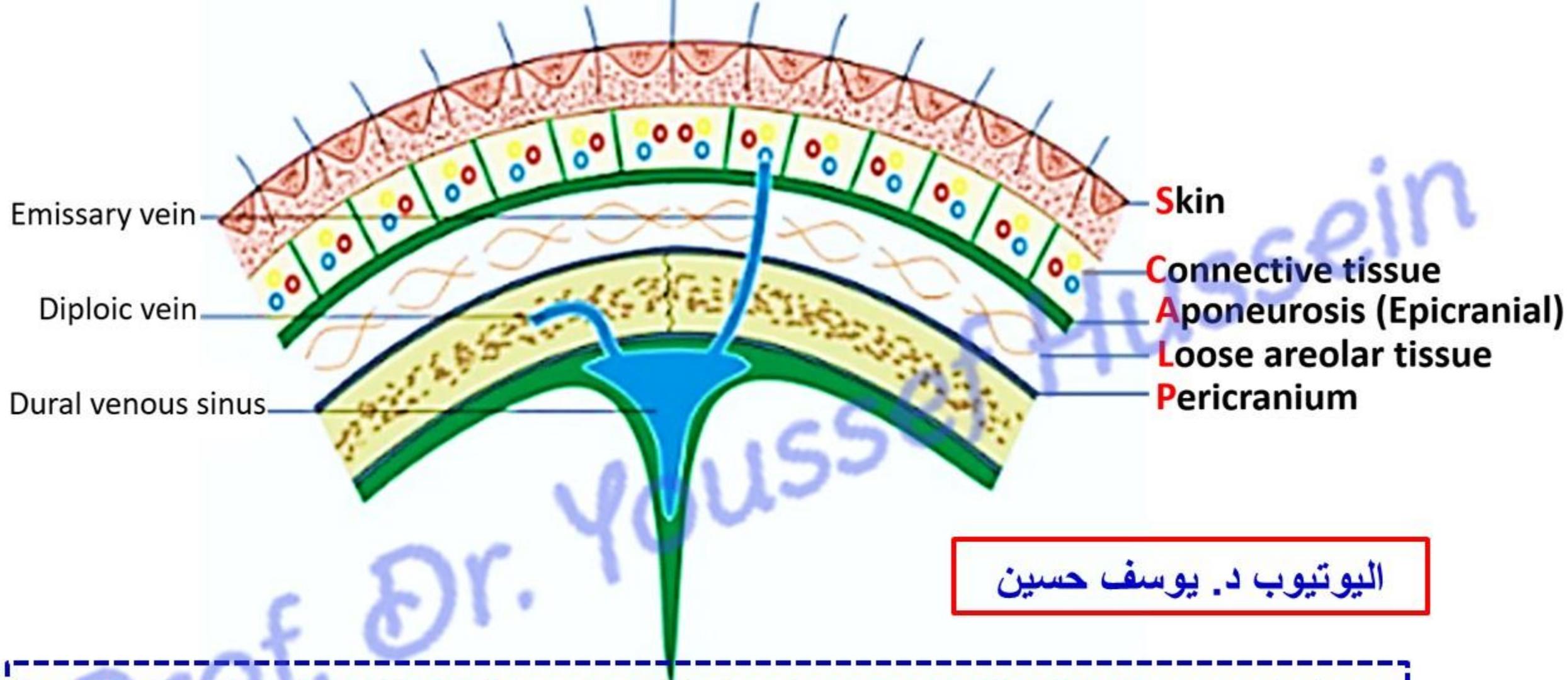
Ophthalmic artery

Supraorbital artery

Superficial temporal artery

- **Superficial temporal artery:**
- **Pulsation** can be felt Infront of auricle.





- **Scalp infection (Acne)** localized in the **loose areolar layer** spreads to the intracranial dural venous sinuses through **emissary veins (valveless)**, causing **meningitis** or **septicemia**.

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Thank You

Questions

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