

وسهلا

أهلا



الأستاذ الدكتور يوسف حسين

أستاذ التشريح وعلم الأجنة - كلية الطب - جامعة الزقازيق - مصر

رئيس قسم التشريح و الأنسجة و الأجنة - كلية الطب - جامعة مؤتة - الأردن

مساعد العميد لشؤون الطلاب والامتحانات - كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

اليوتيوب د. يوسف حسين

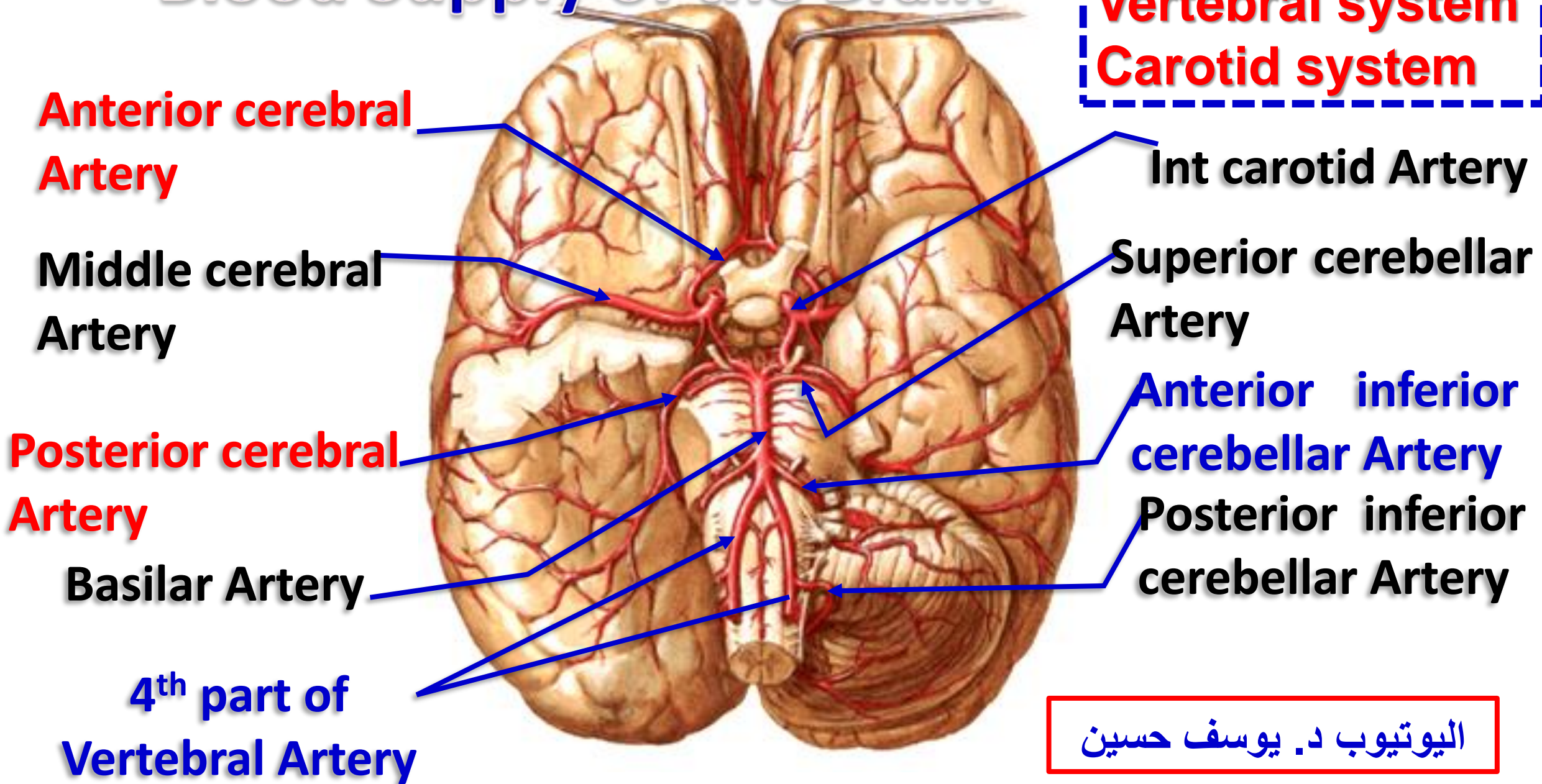
Dr. Youssef Hussein Anatomy اليوتيوب

جروب الفيس د. يوسف حسين (استاذ التشريح)

Blood supply of the brain

اليوتيوب د. يوسف حسين

Blood Supply of the Brain



اليوتيوب د. يوسف حسين



Anterior cerebral Artery

اليوتيوب د. يوسف حسين

Anterior communicating Artery

Anterior cerebral Artery

Optic nerve

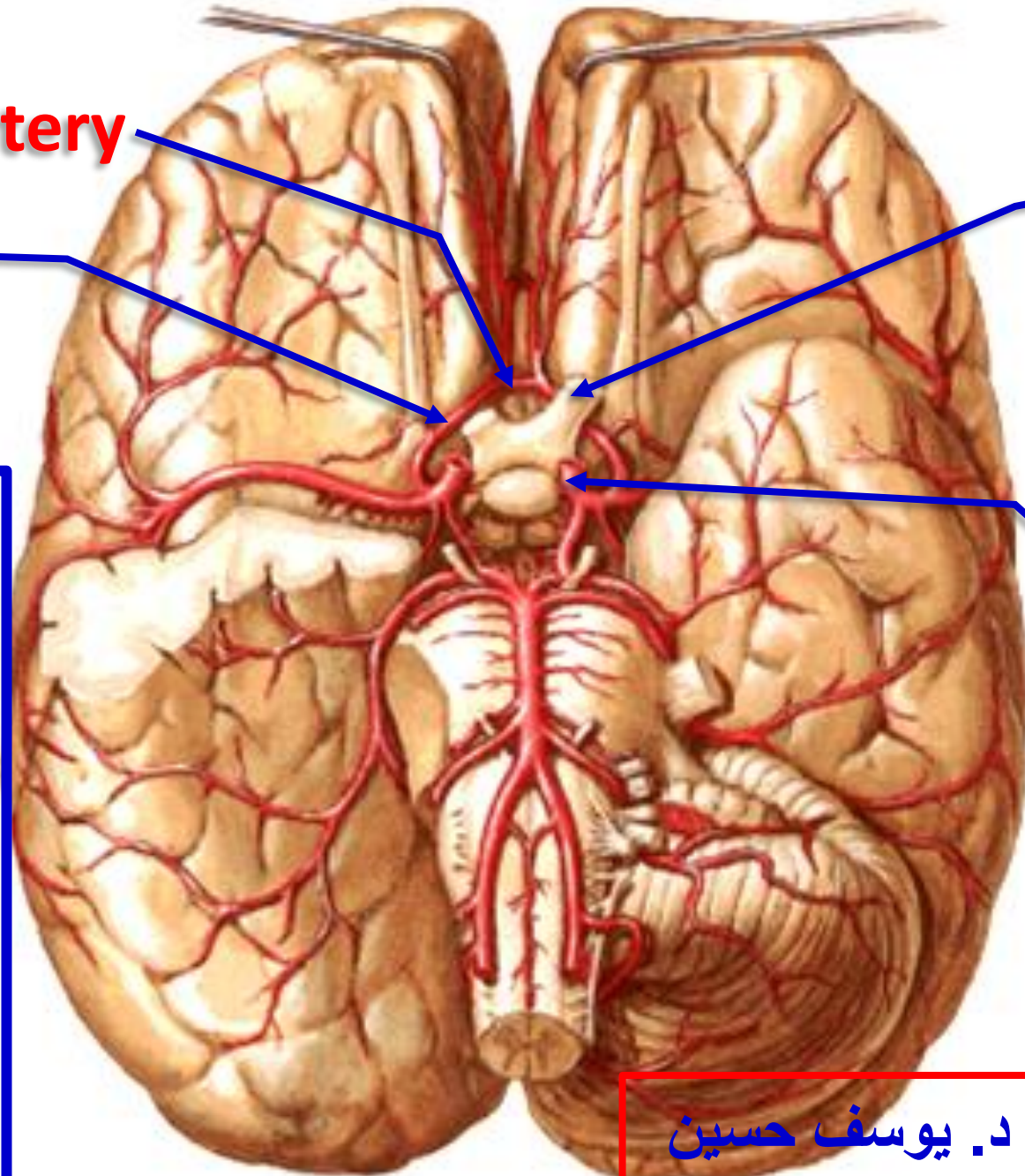
Internal carotid Artery

- **Anterior Cerebral Artery**

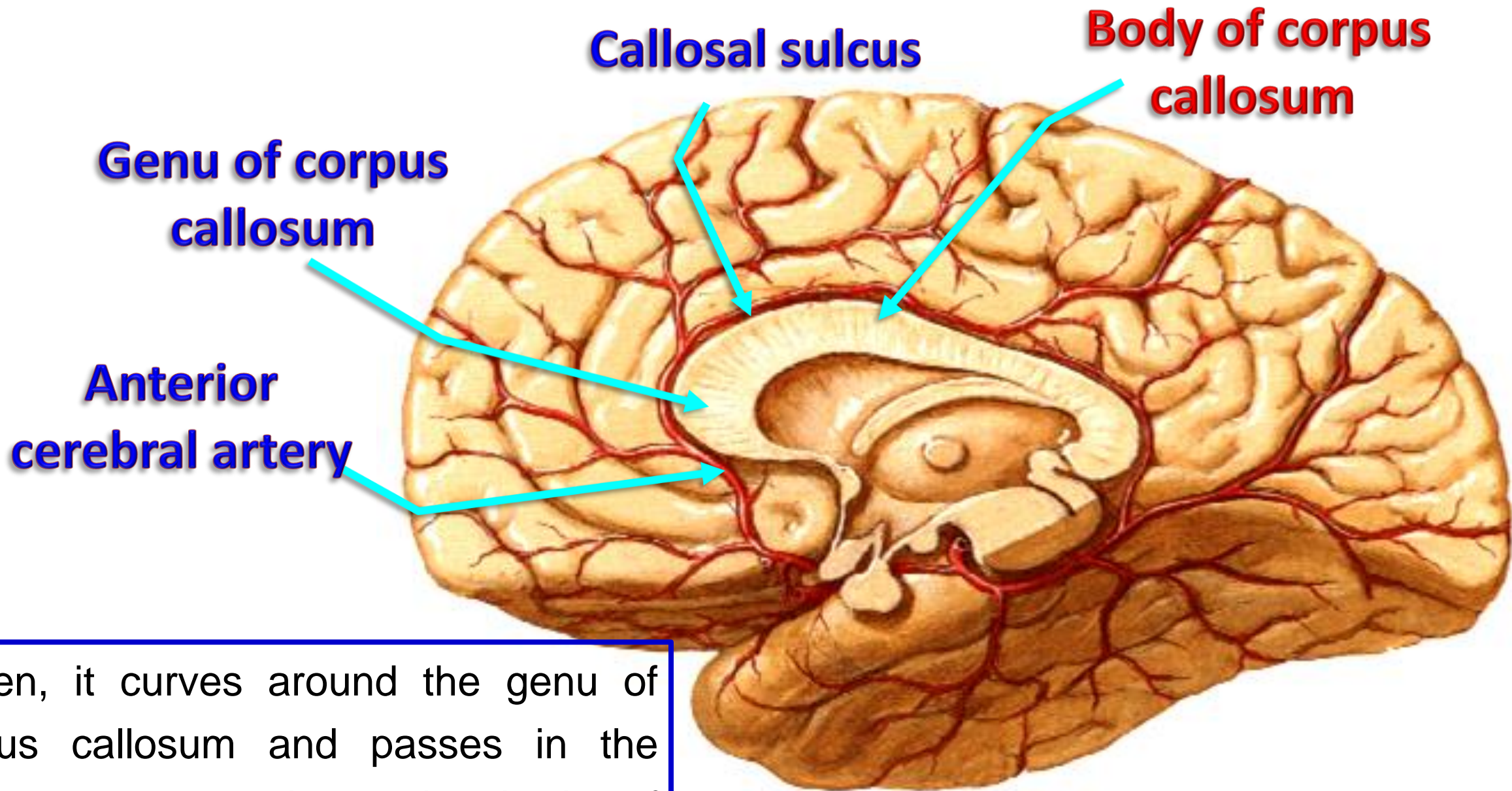
** **Origin:** one of 2 terminal branches of internal carotid artery.

** **Course:**

- It passes medially above optic nerve to median longitudinal fissure.
- It communicates with the opposite side by anterior communicating artery.

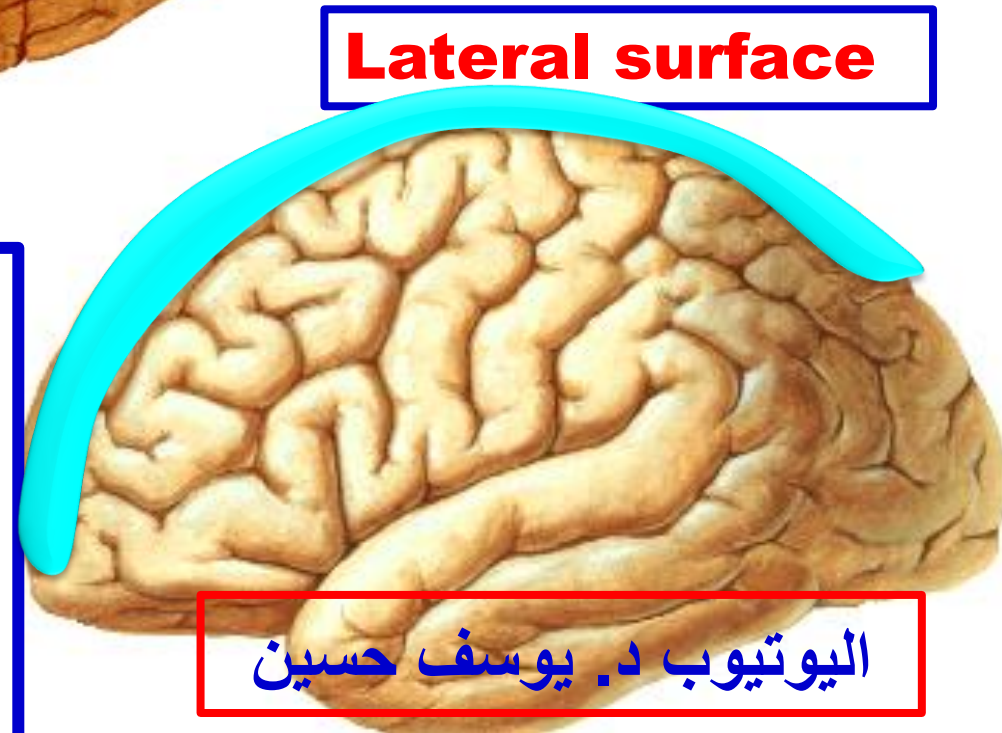
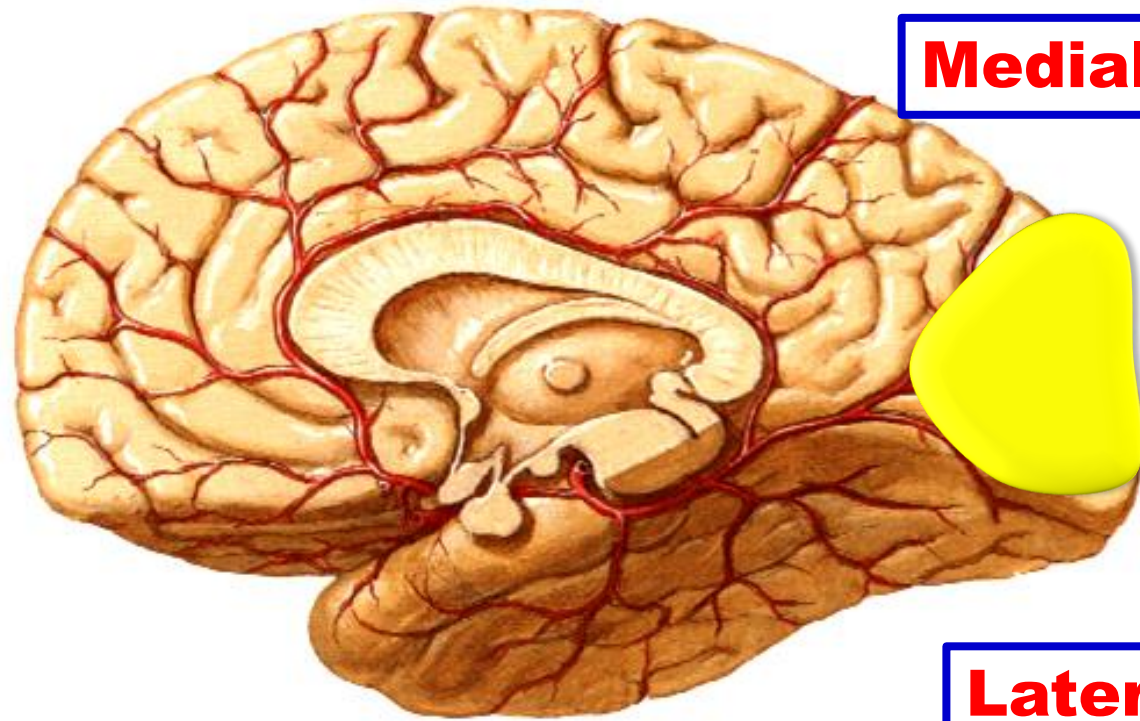


اليوتيوب د. يوسف حسين



- Then, it curves around the genu of corpus callosum and passes in the **callosal sulcus** above the body of corpus callosum.

اليوتيوب د. يوسف حسين



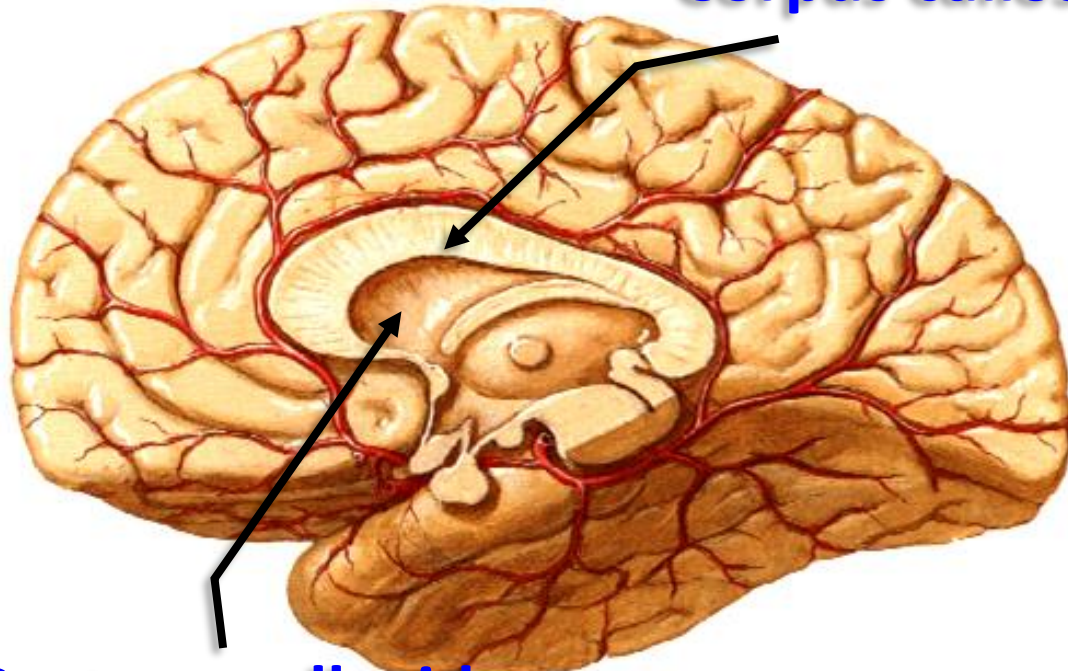
- **Cortical branches of anterior cerebral artery,**

a- Medial surface except the occipital lobe.

b- Upper one finger breadth of superolateral surface except the occipital lobe.

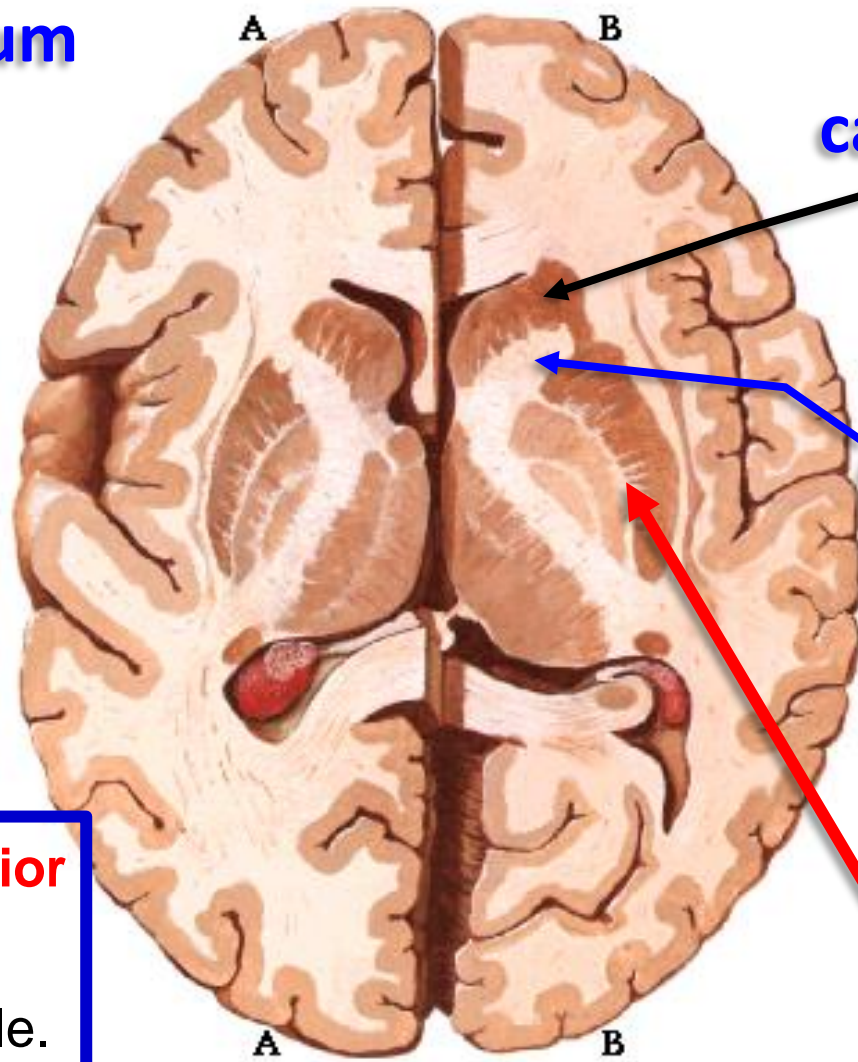
c- Medial part (1/3) of the orbital surface on the inferior surface.

Corpus callosum



Septum pellucidum

Head of the caudate nucleus



Anterior limb of internal capsule

lentiform nucleus

• **Central branches; pass through the anterior perforated substance to supply**

- 1- Anterior part of anterior limb of internal capsule.
- 2- Head of caudate nucleus.
- 3- Lentiform nucleus.
- 4- Corpus callosum except splenium.
- 5- Septum pellucidum.

اليوتيوب د. يوسف حسين

Middle cerebral Artery

اليوتيوب د. يوسف حسين

اليوتيوب د. يوسف حسين

Middle cerebral
artery

Posterior ramus of
lateral sulcus

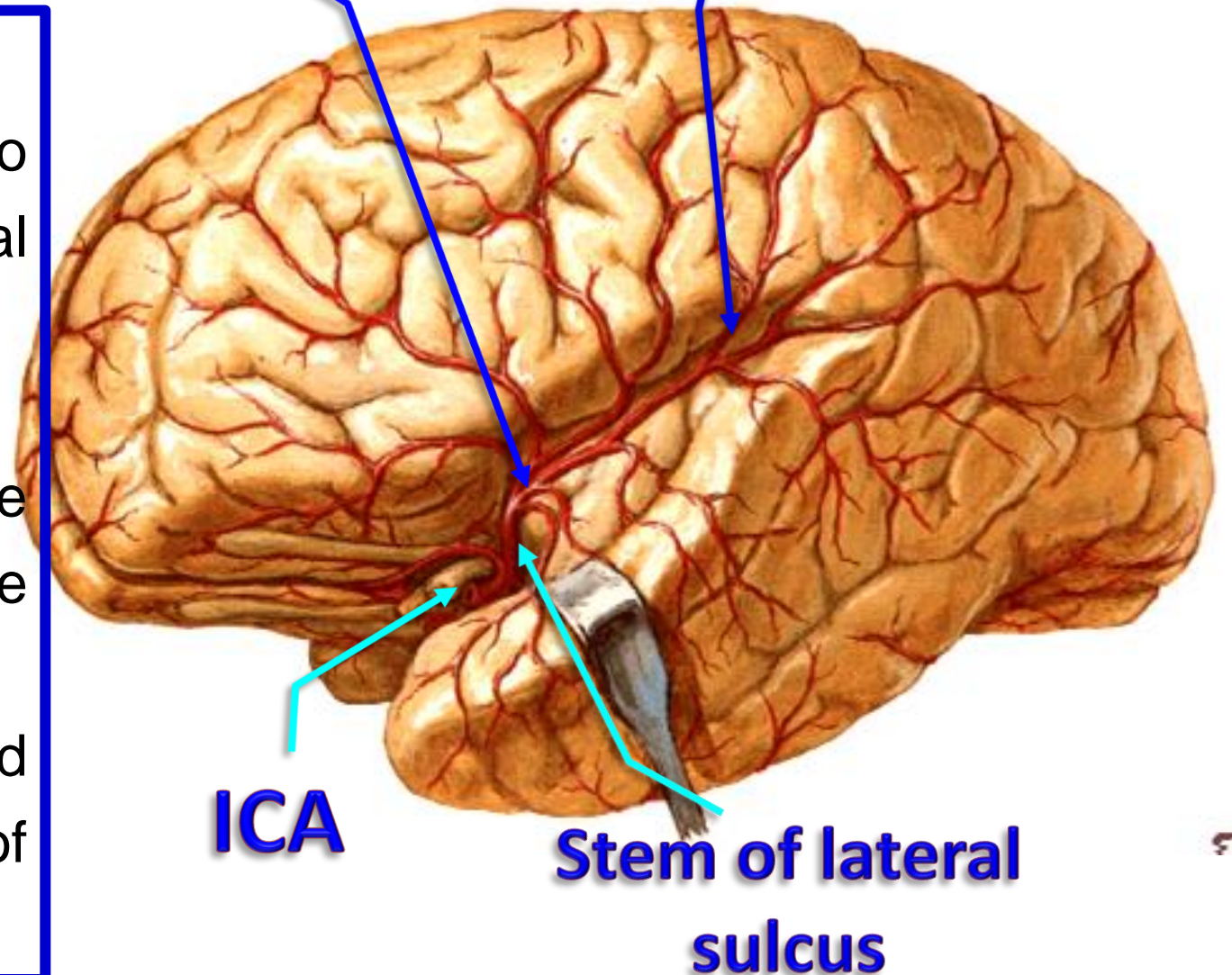
- **Middle Cerebral Artery**

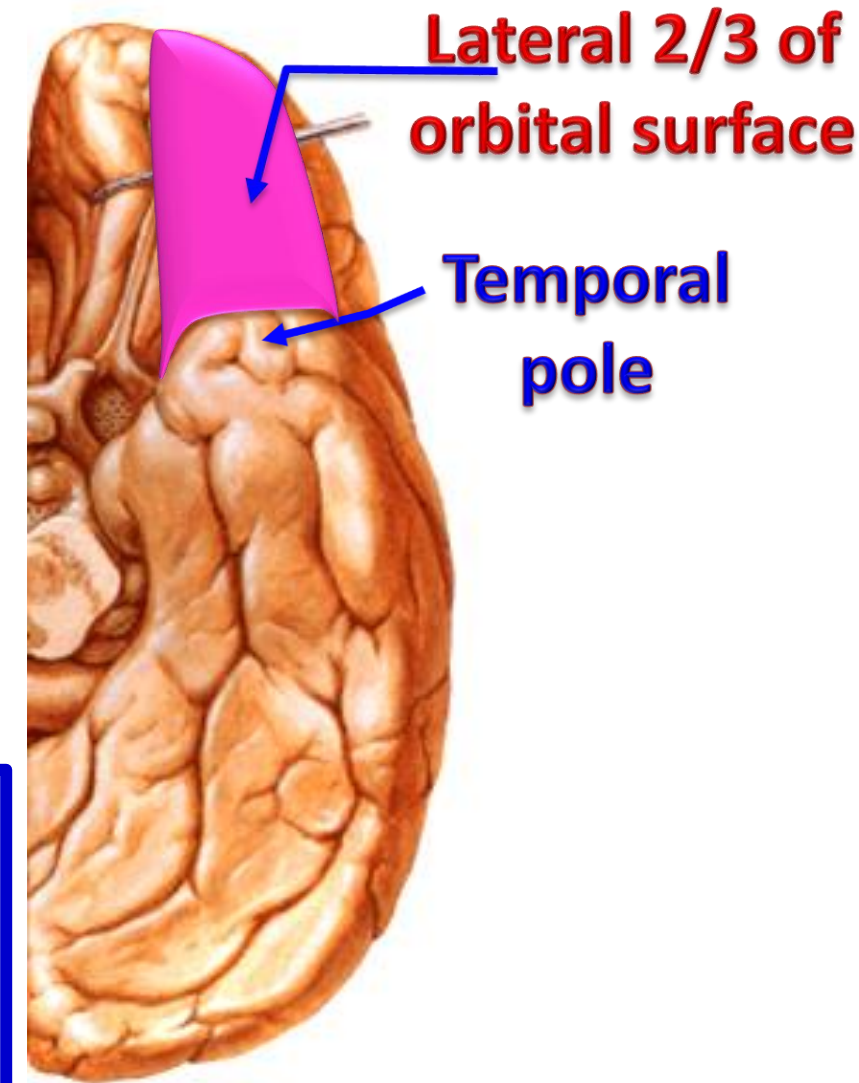
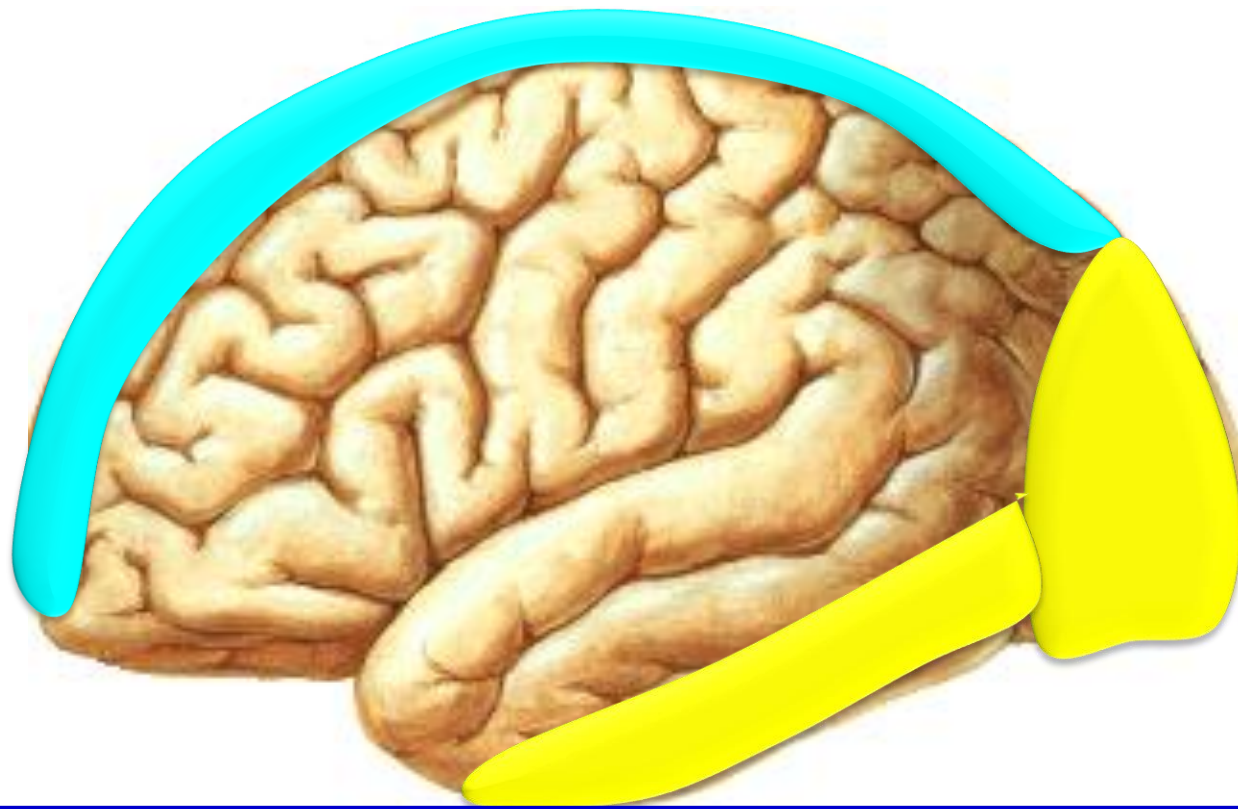
** **Origin:** is the larger of the two terminal branches of the internal carotid artery.

** **Course:**

- It passes laterally in stem of the **lateral sulcus** (opposite to the pterion).

- Then it turns upward and backward in the posterior ramus of the lateral sulcus.





- **Cortical branches of middle cerebral artery**

1- **Superolateral surface** including the insula **except**;

- a- Upper one finger breadth (by anterior cerebral artery).
- b- Lower one finger breadth (by posterior cerebral artery).
- c- Occipital lobe {supplied by the posterior cerebral artery}.

2- Lateral part (2/3) of the orbital surface of the **inferior surface**.

3- **Temporal pole**.

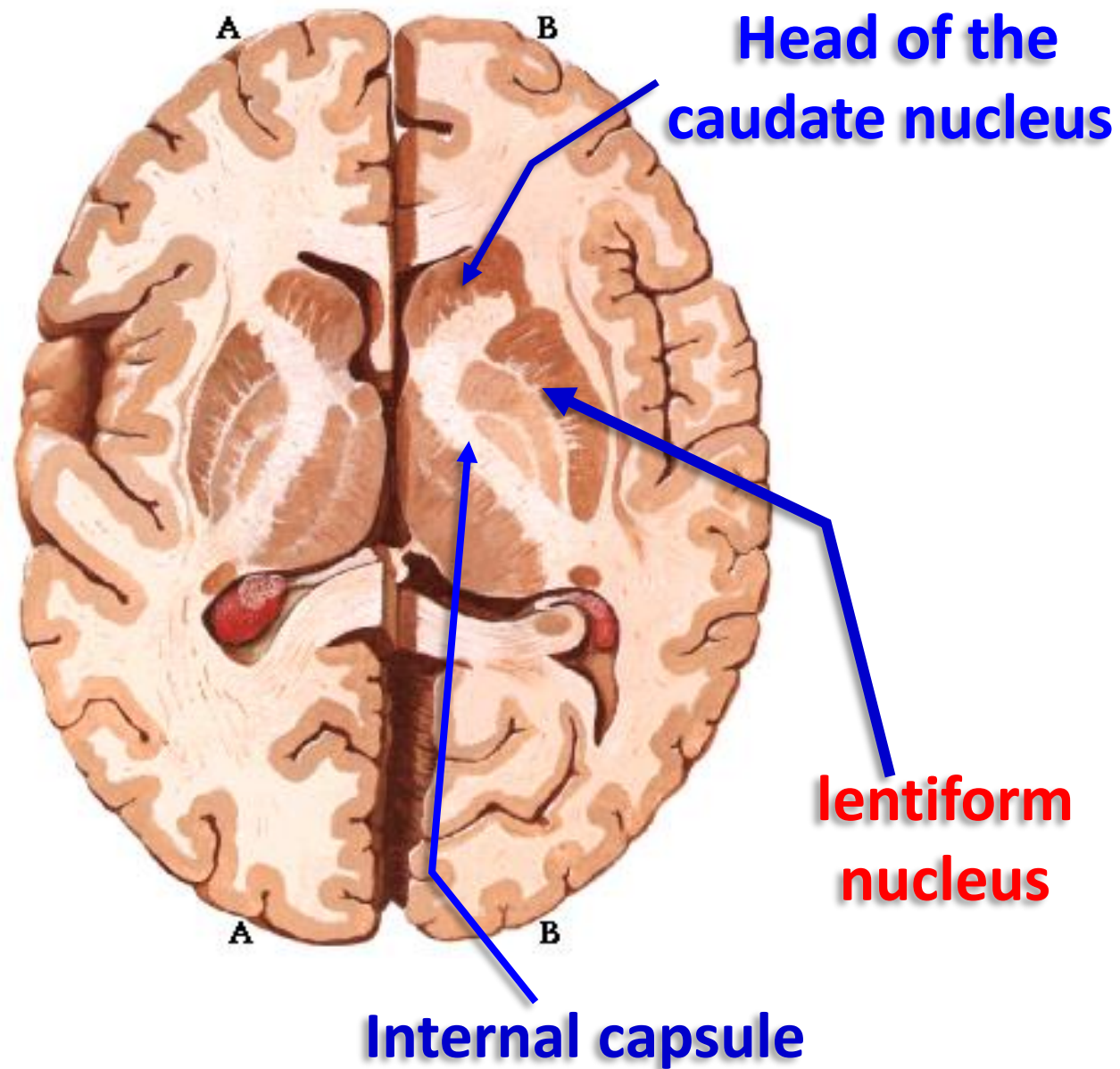
اليوتيوب د. يوسف حسين

- **Central branches; pass through the anterior perforated substance**

- 1- Posterior part of the anterior limb, genu and posterior limb of the internal capsule.
- 2- Head of caudate nucleus.
- 3- Lentiform nucleus.

- * **Middle cerebral artery supplies:**

- 1- Motor and sensory areas of opposite side of the body **except** lower limb and perineum by anterior cerebral artery.
- 2- Writing center in middle frontal gyrus.
- 3- Motor speech area in inferior frontal gyrus.
- 4- Auditory area in superior temporal gyrus.
- 5- Most of the internal capsule.





Posterior cerebral Artery

اليوتيوب د. يوسف حسين

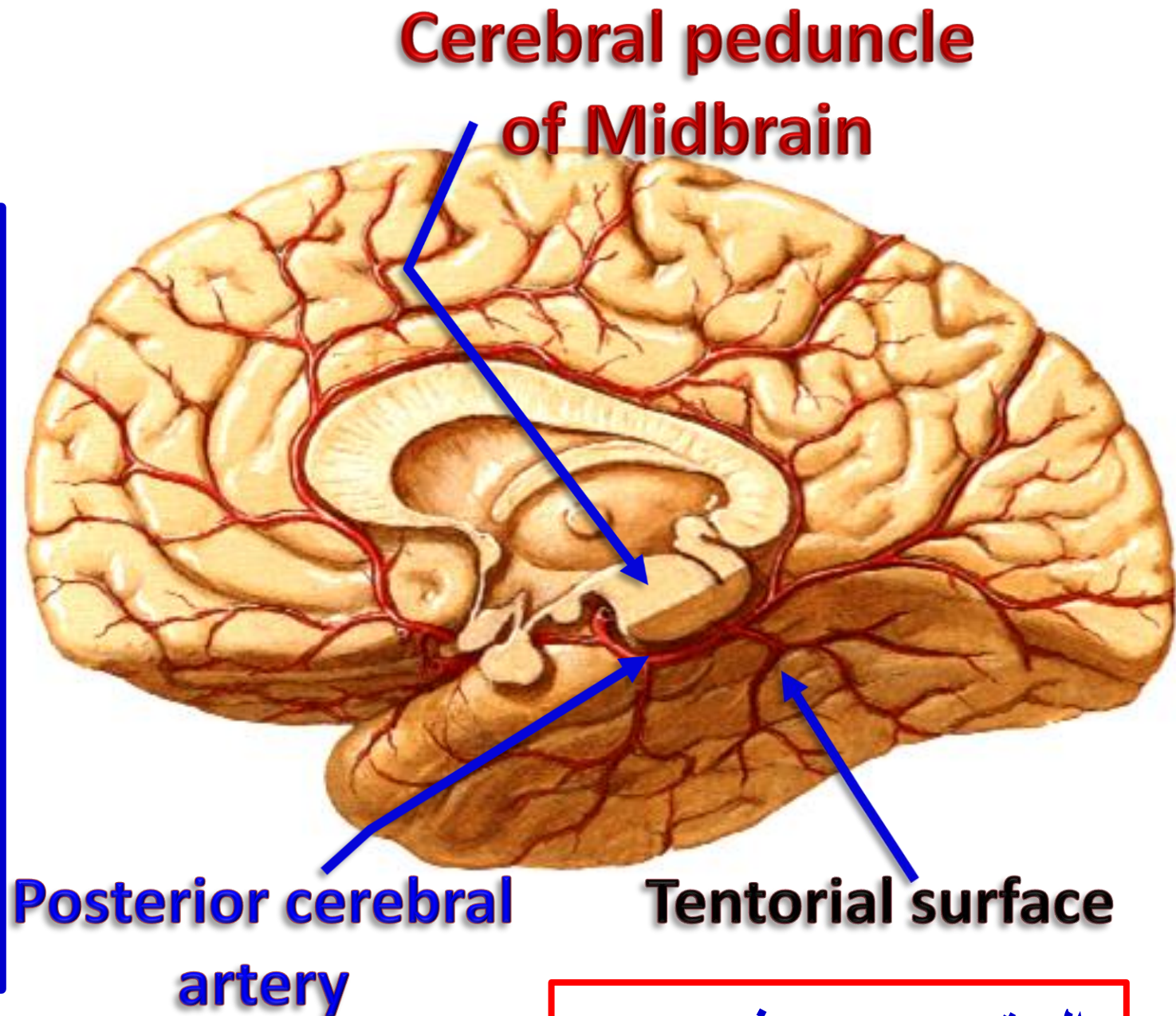
- **Posterior Cerebral Artery**

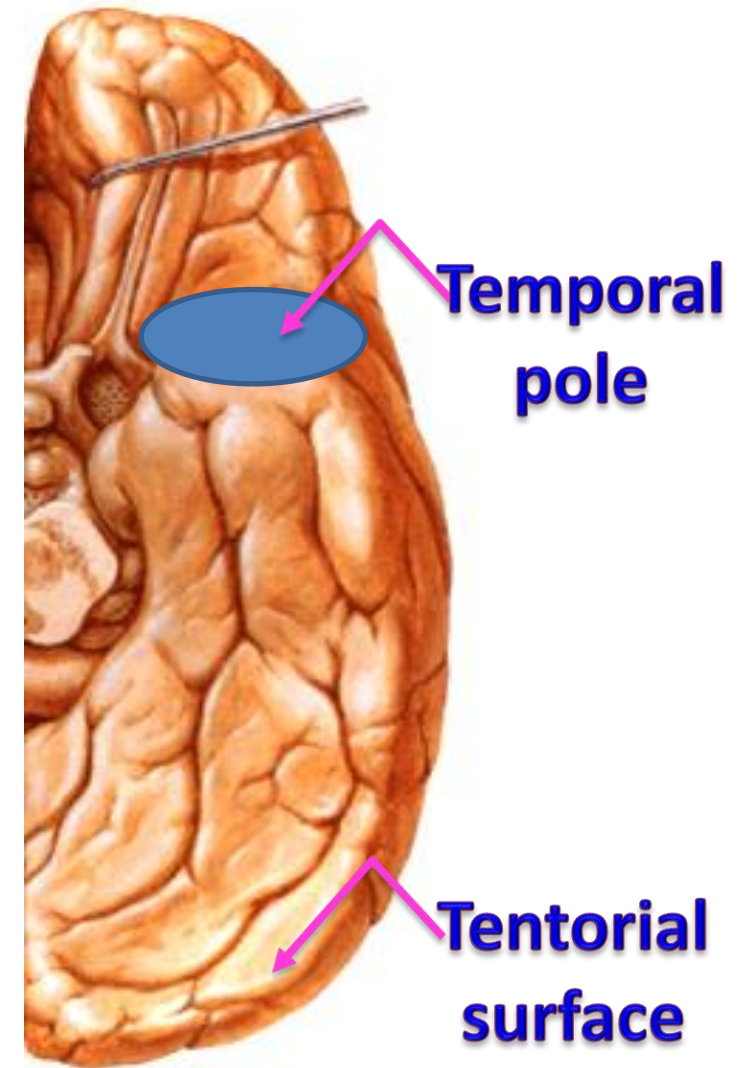
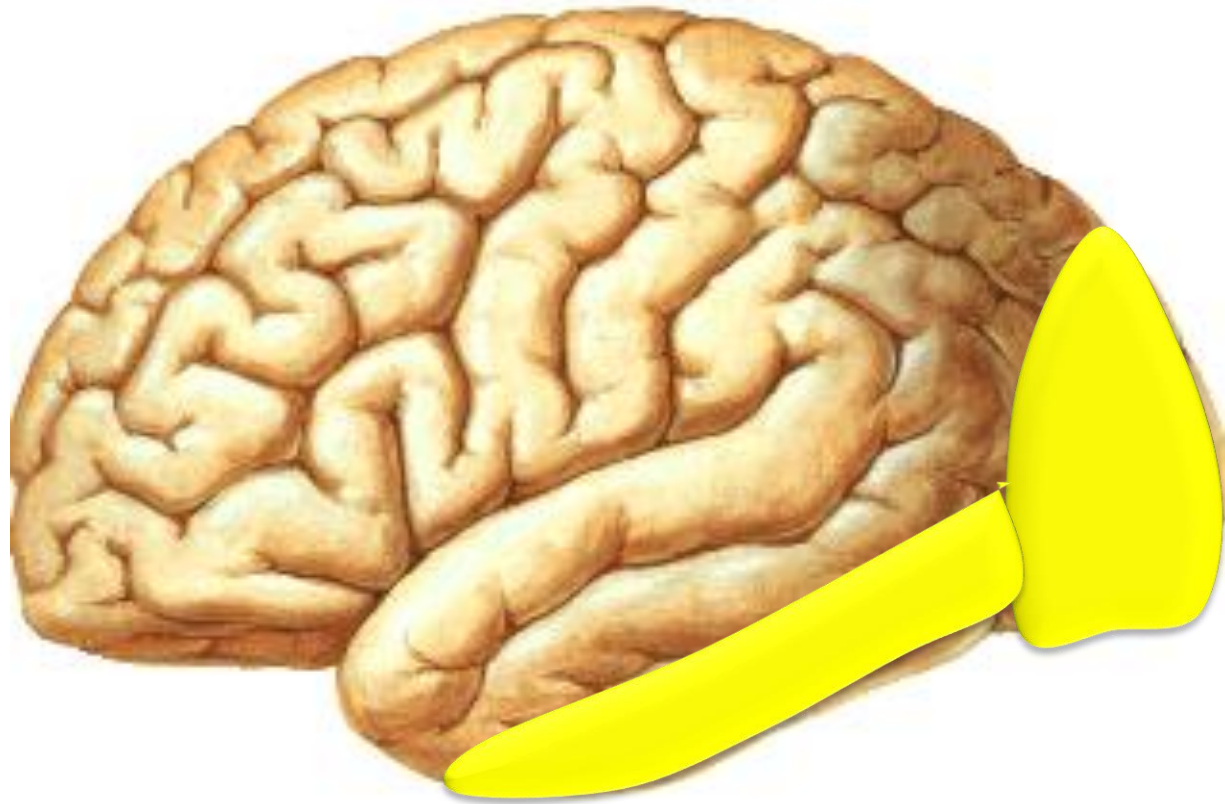
** **Origin:** one of the two terminal branches of the basilar artery.

** **Course;**

- It winds round the cerebral peduncle to reach the **tentorial surface** of the cerebral hemisphere.

- It runs backward to reach the occipital pole.





- **Cortical branches of Posterior cerebral artery**

1- **Tentorial surface** of the cerebral hemisphere **except** temporal pole.

2- One finger breadth on the superolateral surface along the inferior border.

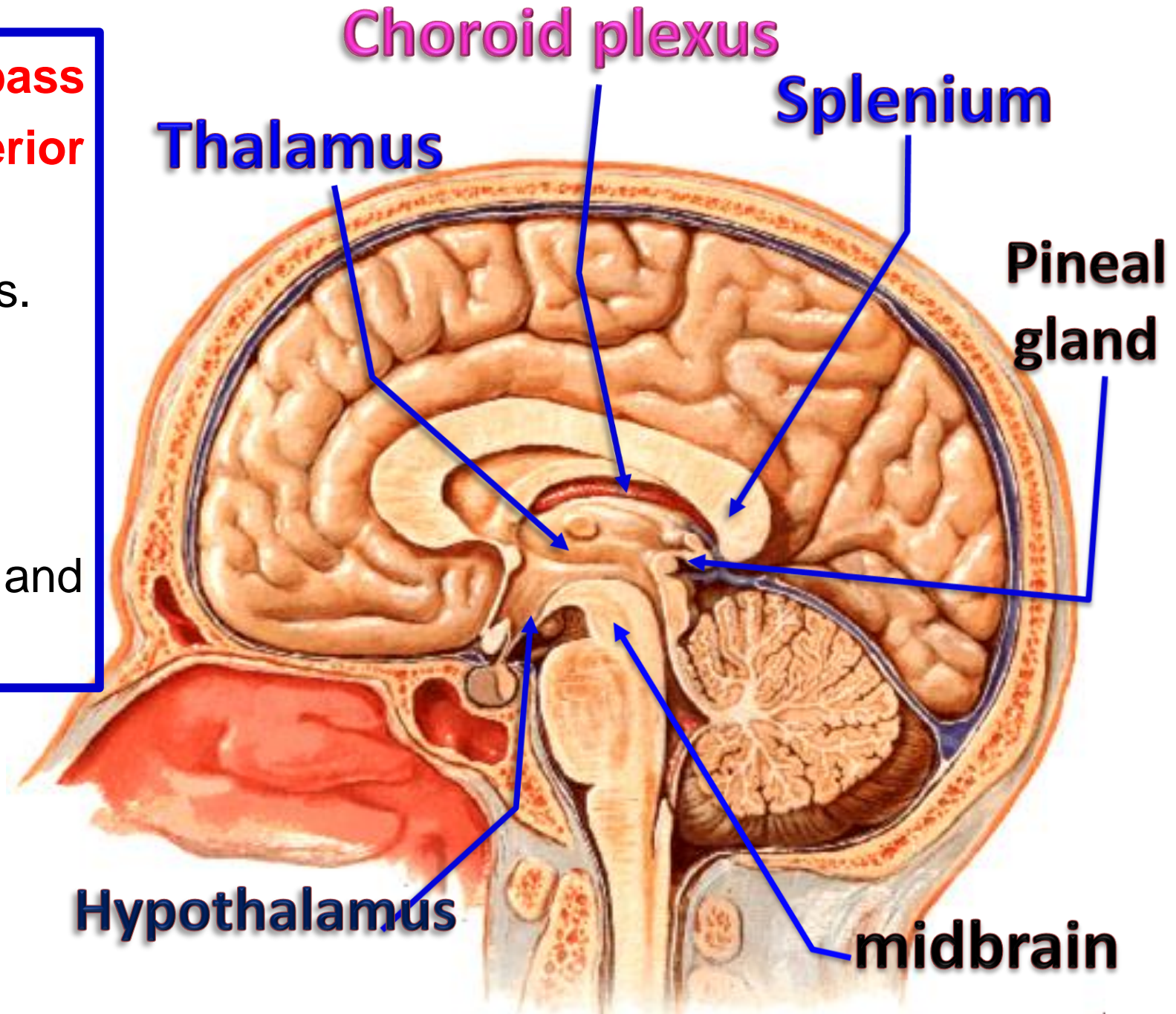
3- All surfaces of the occipital lobe (**visual center**)

اليوثيوب د. يوسف حسين

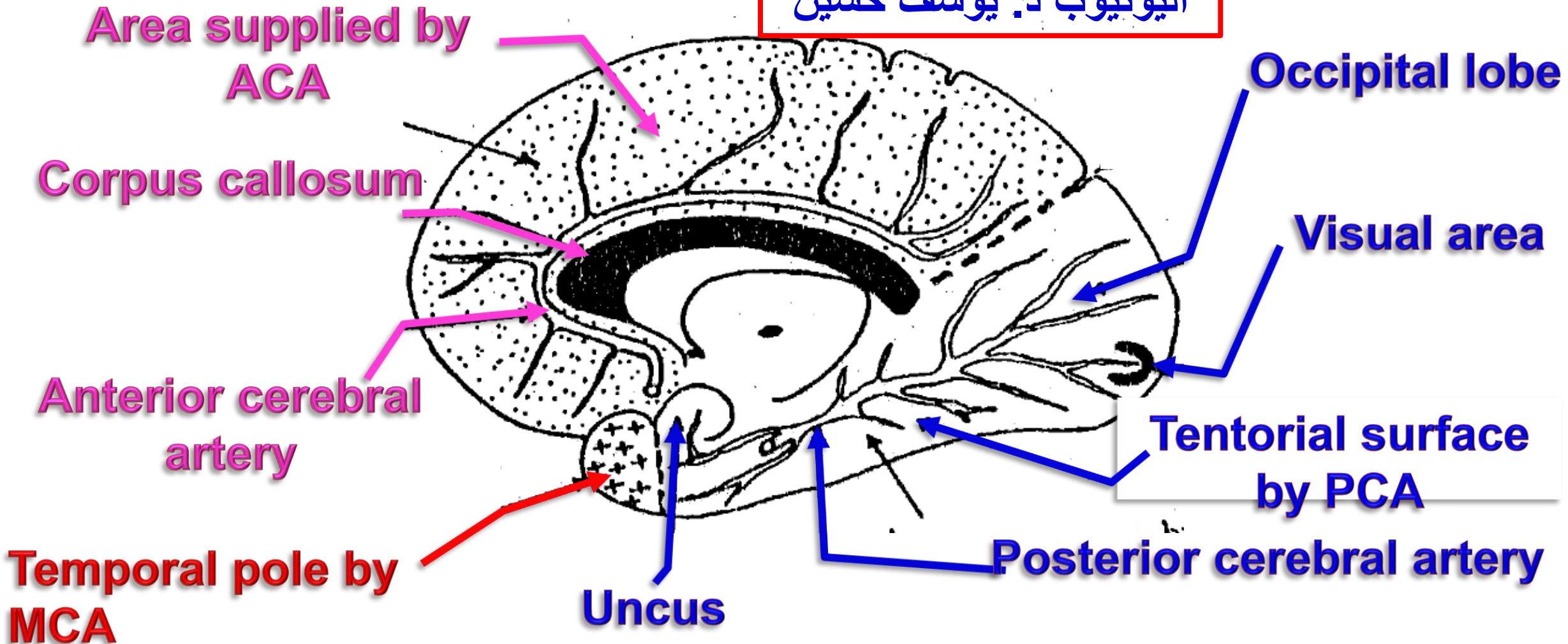
- **Central branches; pass through the posterior perforated substance**

- a) Thalamus and hypothalamus.
- b) Midbrain and Pineal body.
- c) Splenium of the corpus callosum.
- d) Choroid plexuses of the 3rd and lateral ventricles.

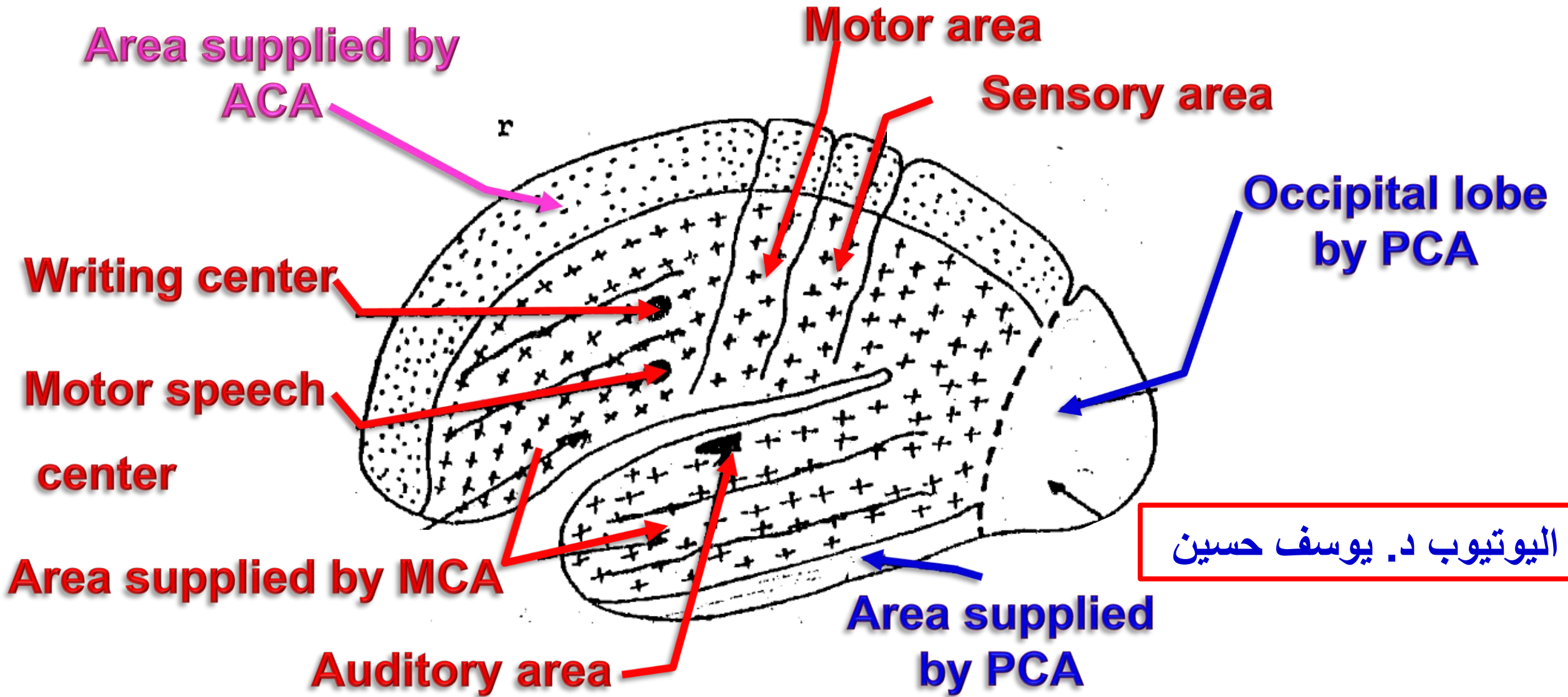
اليوثيوب د. يوسف حسين



اليوثيوب د. يوسف حسين



Medial surface of right cerebral hemisphere



اليوثيوب د. يوسف حسين

Superolateral surface of left cerebral hemisphere

Area supplied by
ACA

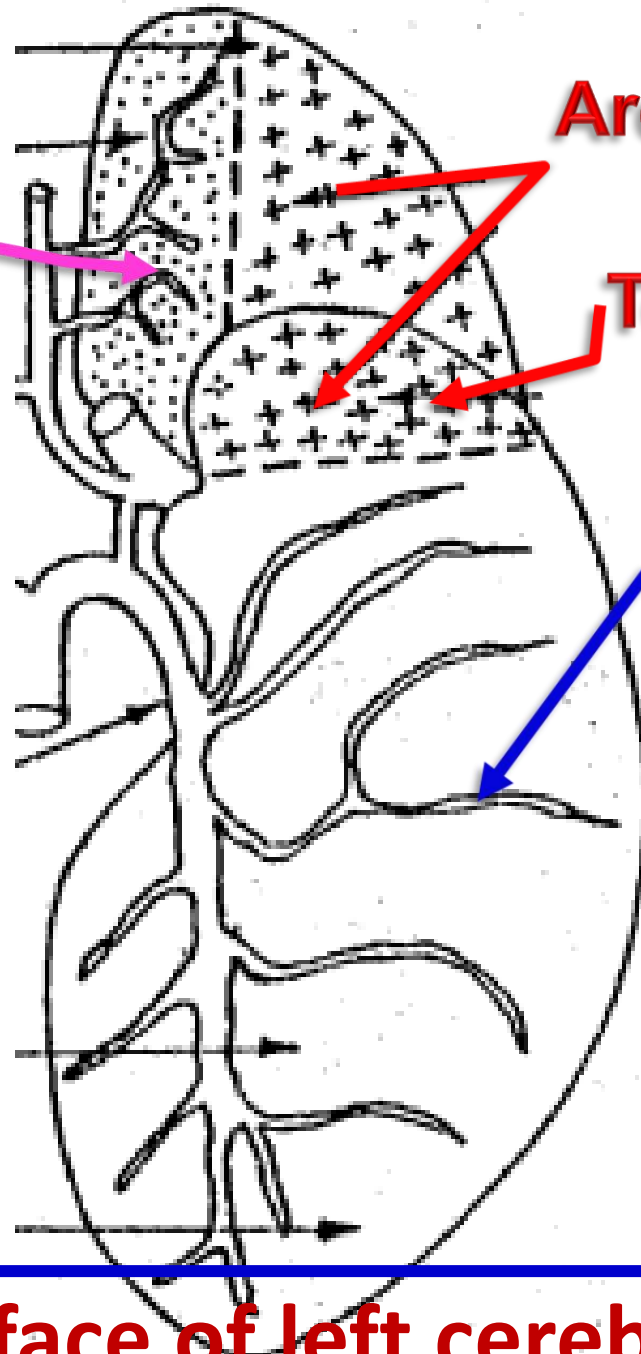
Area supplied by MCA

Temporal pole

Tentorial surface
by PCA

اليوثيوب د. يوسف حسين

Inferior surface of left cerebral hemisphere



Circle of Willis

**Ant. communicating
Artery**

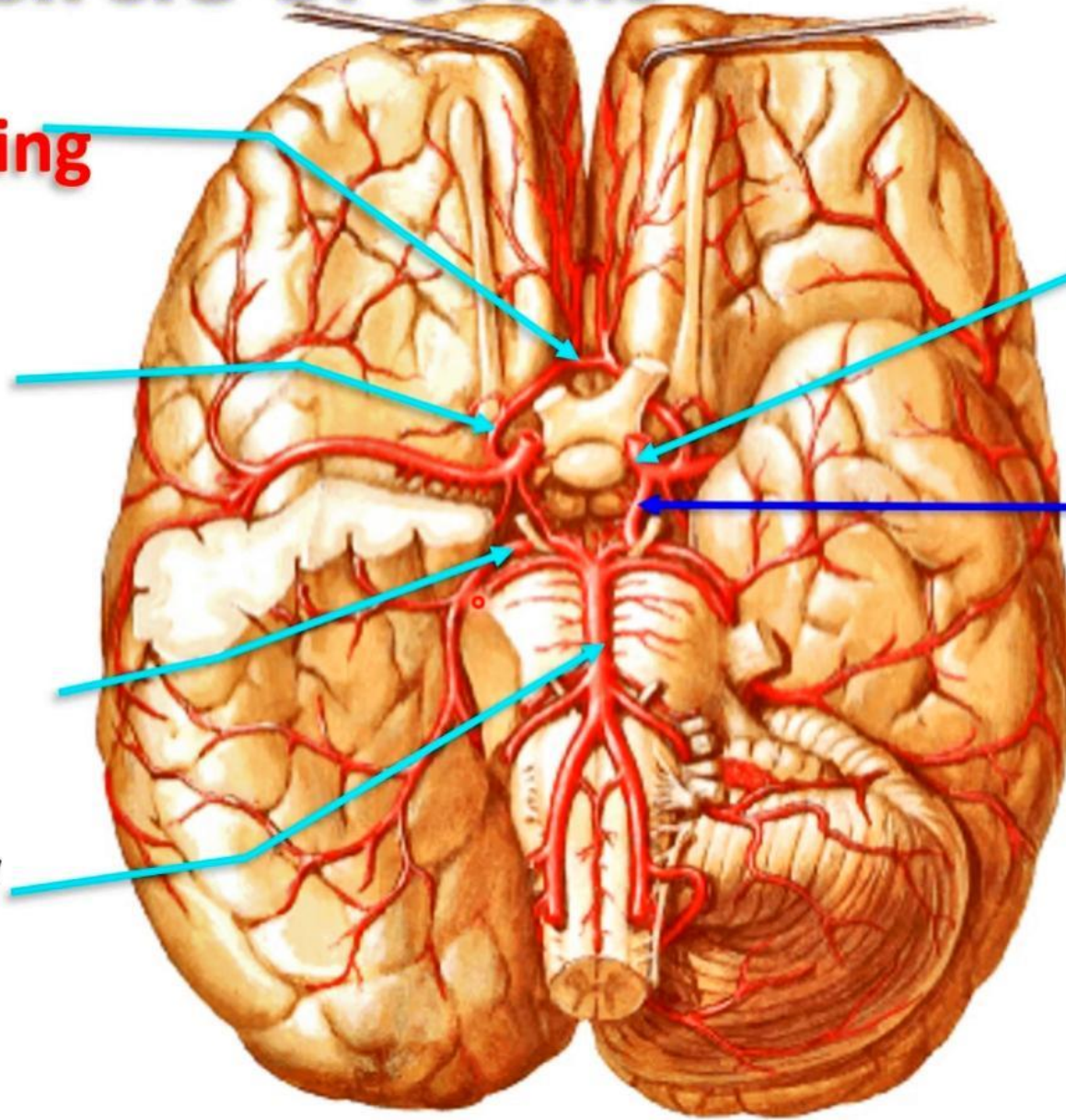
**Ant. cerebral
Artery**

**Post. cerebral
Artery**

Basilar Artery

**Int carotid
Artery**

**Post.
Communicating
artery**



• Circle of Willis

- **Site**; it is situated in interpeduncular fossa at the base of the brain.
- **Formation**; anastomosis between carotid systems and vertebral system.

- The arteries sharing in the circle are;

1 - Two internal carotid arteries.

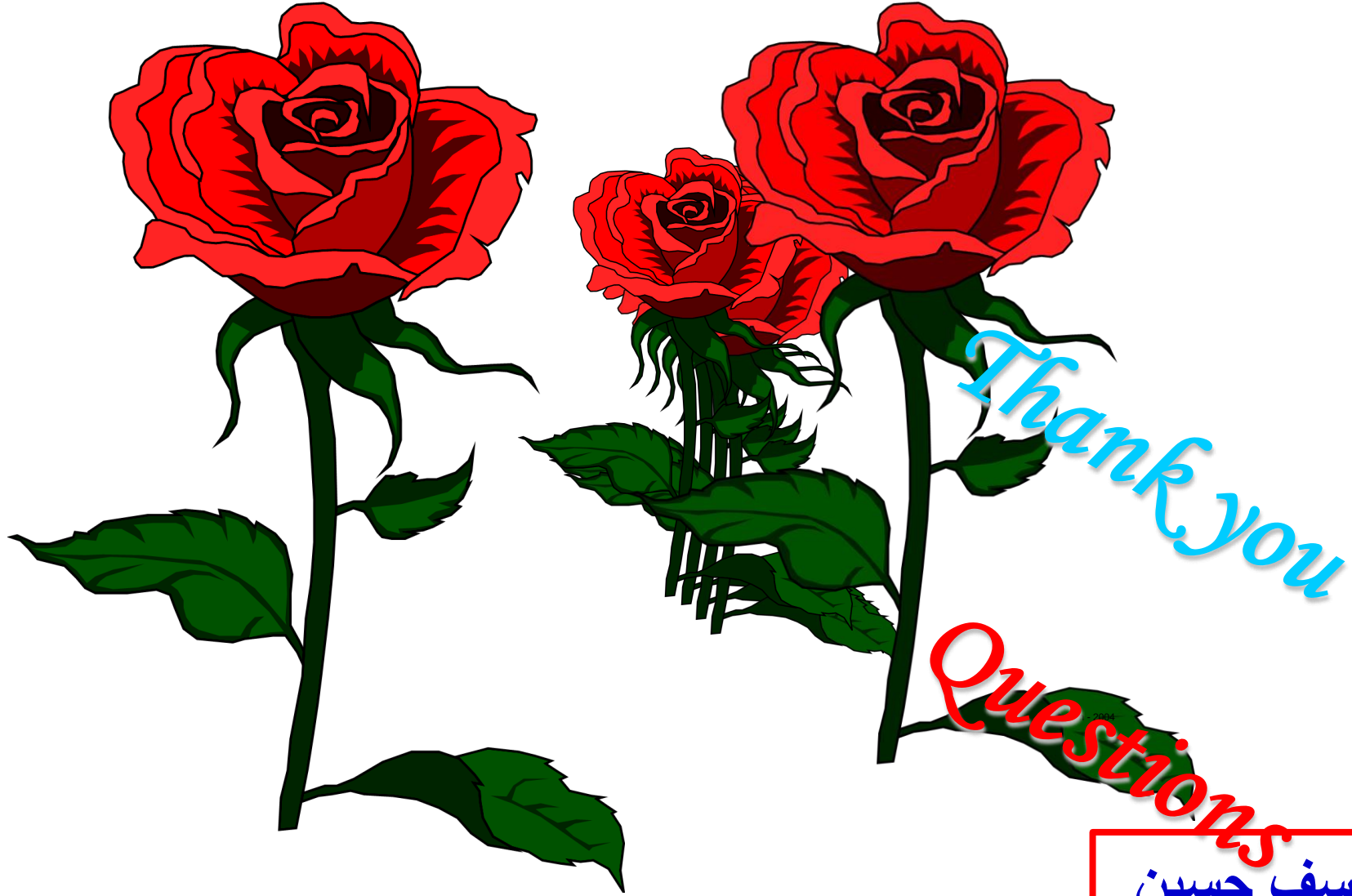
2- Two anterior cerebral arteries from internal carotid artery.

3- One anterior communicating artery; between 2 anterior cerebral arteries.

4- Two posterior cerebral arteries terminal branches of basilar artery.

5- Two Posterior communicating arteries from internal carotid artery to the posterior cerebral artery of the same side.





اليوتيوب د. يوسف حسين