

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

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

رئيس قسم التشريح والأنسجة والأجنة - كلية الطب - جامعة مؤتة - الأردن

دكتورة من جامعة كولونيا المانيا

جروب الفيس د. يوسف حسين (استاذ التشريح)

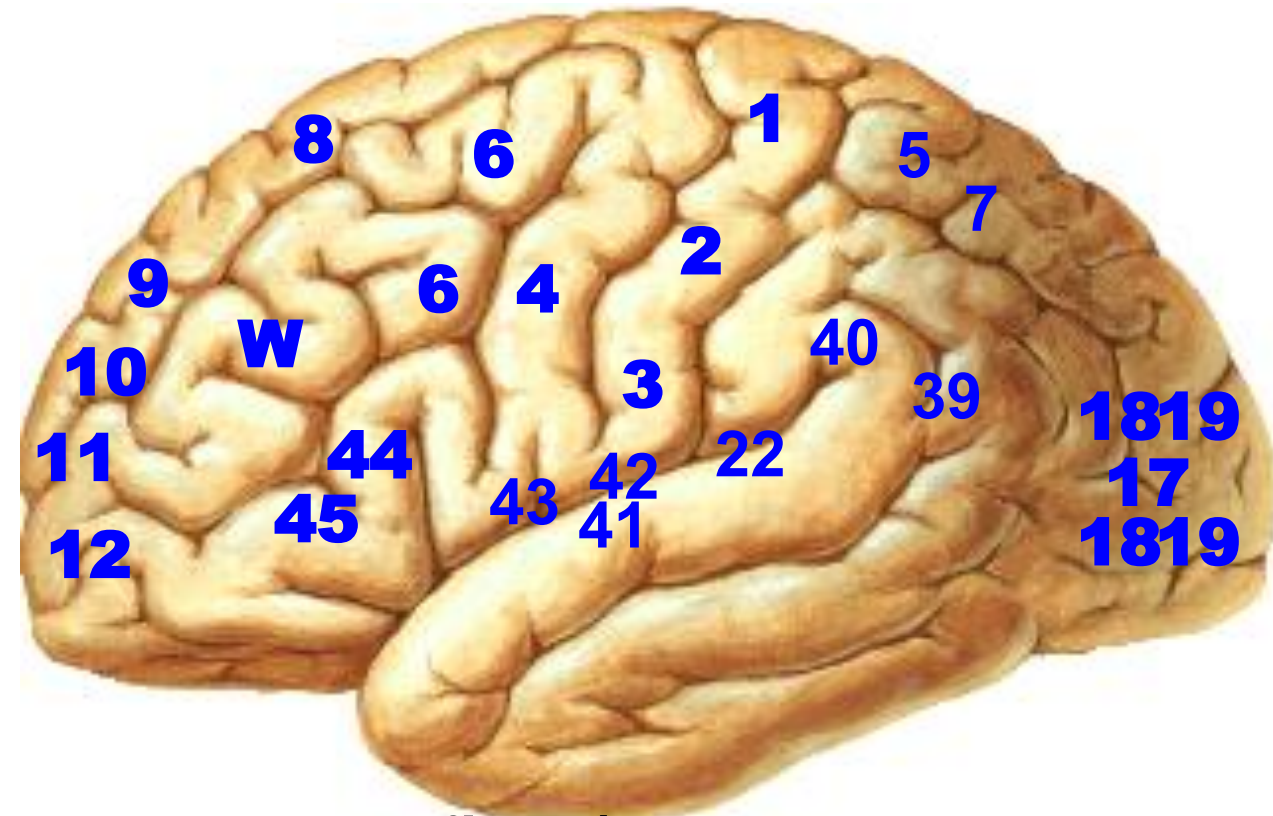
اليوتيوب د. يوسف حسين

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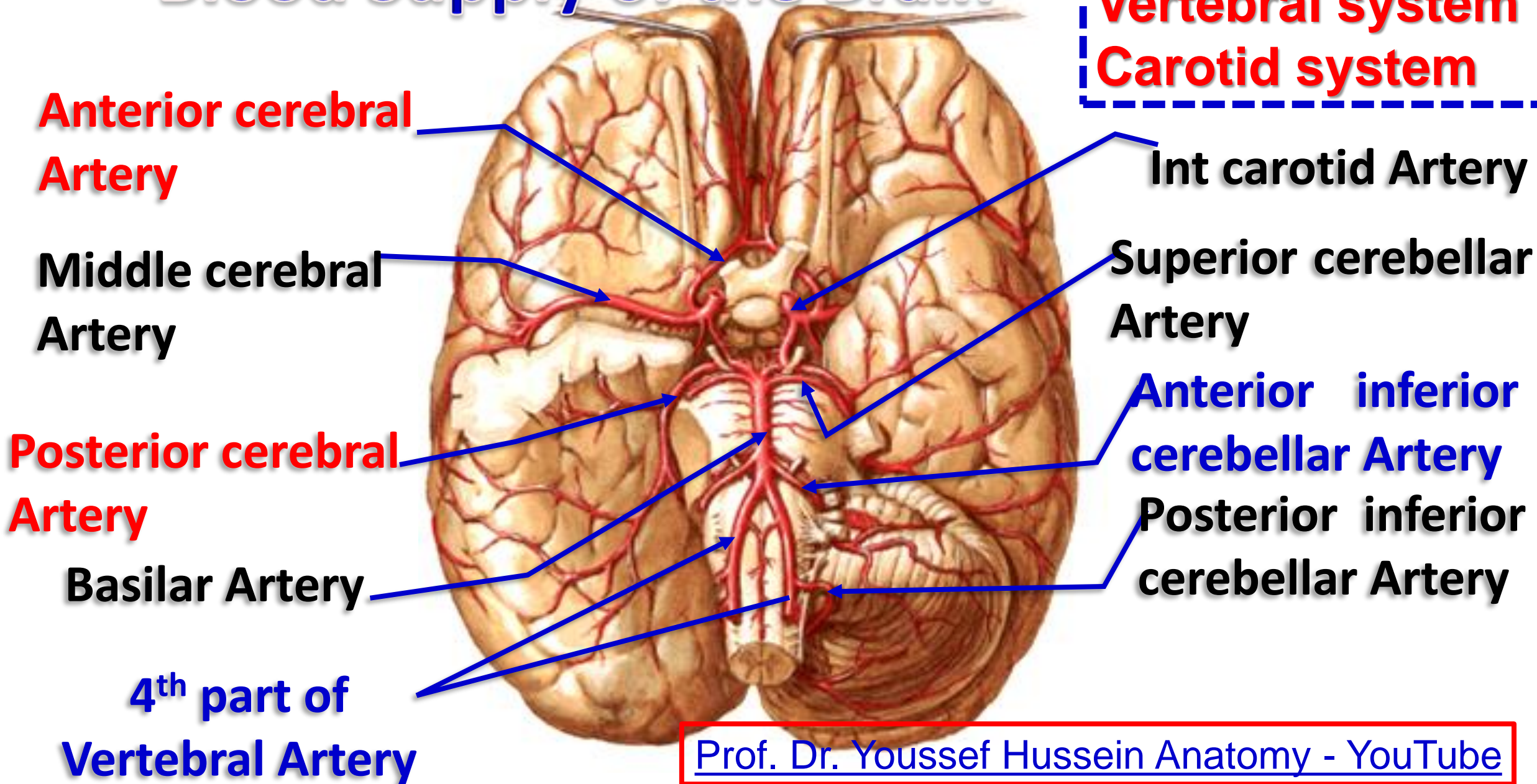
Blood supply of the brain

- **4. Motor == hemiplegia == Contralateral UMNL**
- **6. Premotor == Apraxia ==**
- المريض غير قادر على أداء الحركات المكتسبة بالتسلسل الصحيح
- **W (Exner's area); = Agraphia ==** عدم القدرة على الكتابة
- **44,45= Broca's area == Motor speech == Motor Aphasia = = =** العجز اللغوي
- == عدم القدرة على فهم اللغة واستخدام اللغة بالشكل السليم
- **39,40 = Werneck's area == Sensory speech=** مسؤولية عن فهم الكلمات المنطوقة والمكتوبة =
- **Sensory aphasia=** سوء فهم اللغة المكتوبة والمنطوقة == الكلمات مثل السطة وليس لها معنى == عجز في =الطلاقة اللغة وفهم المعنى
- **Alexia ==** عدم القدرة على القراءة
- **9-12 Frontal lobe syndrome=**
 - =لا يستطيع المريض التركيز ويتشتت انتباهه بسهولة؛
 - هناك نقص في المبادرة والبصيرة والمنظور والتذكروالتخطيط
 - والتفكير وحل المشاكل والتحفيز== جانب آخر شائع هو اللامبالاة (أي اللامبالاة العاطفية الشديدة) =مع اعتراف الكذب
- **Visual agnosia == العمى البصري**



- **Frontal eye field (Brodmann area 8)**
- **Primary sensory 1,2,3**
- **41,42 primary auditory**
- **22 secondary auditory**
- **17 primary visual**
- **18,19 secondary visual**
- **Gustatory area (area 43): insula**

Blood Supply of the Brain





Anterior cerebral Artery

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Anterior communicating Artery

Anterior cerebral Artery

Optic nerve

Internal carotid Artery

- **Anterior Cerebral Artery**

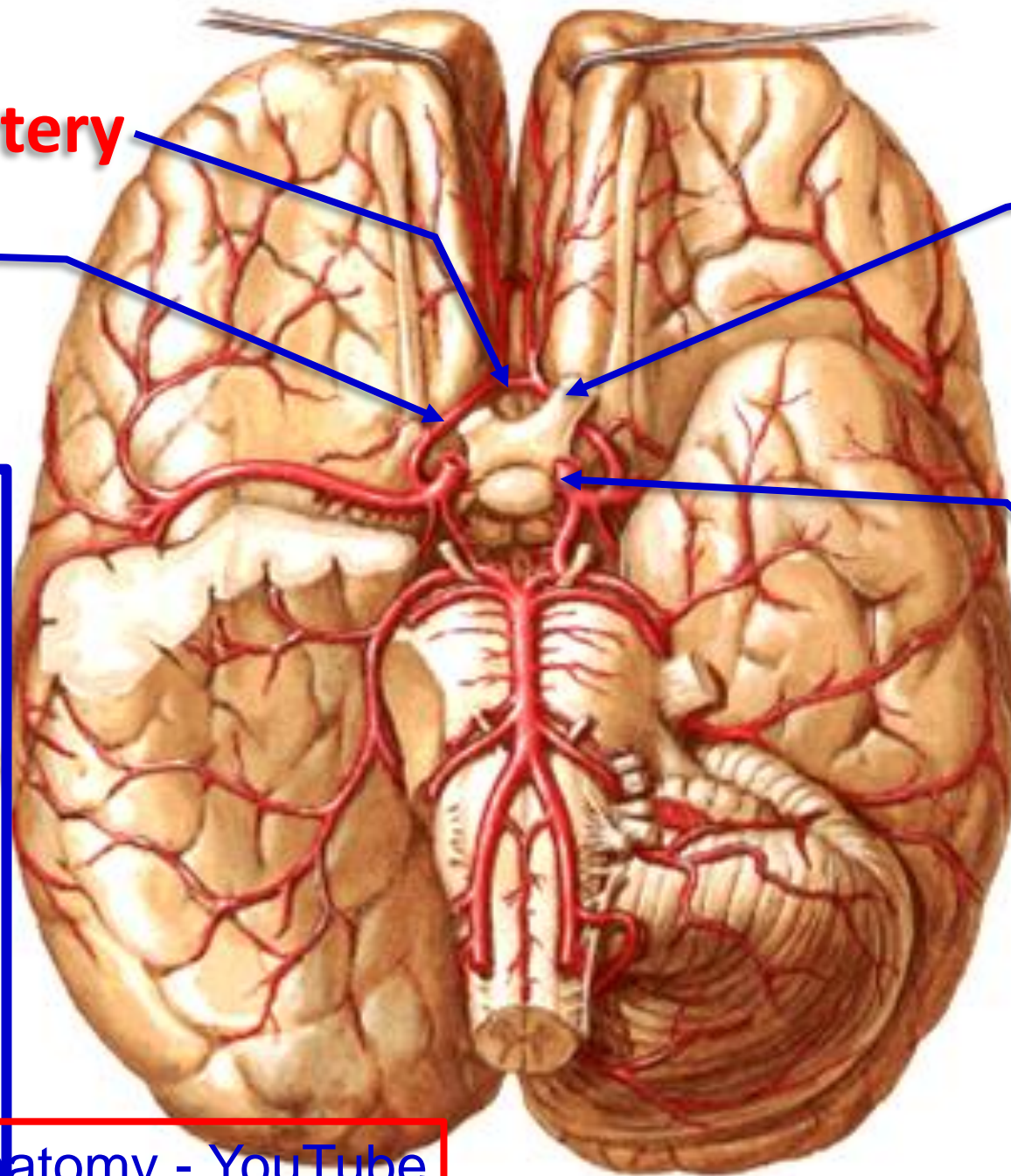
** **Origin:** one of 2 terminal branches of internal carotid artery.

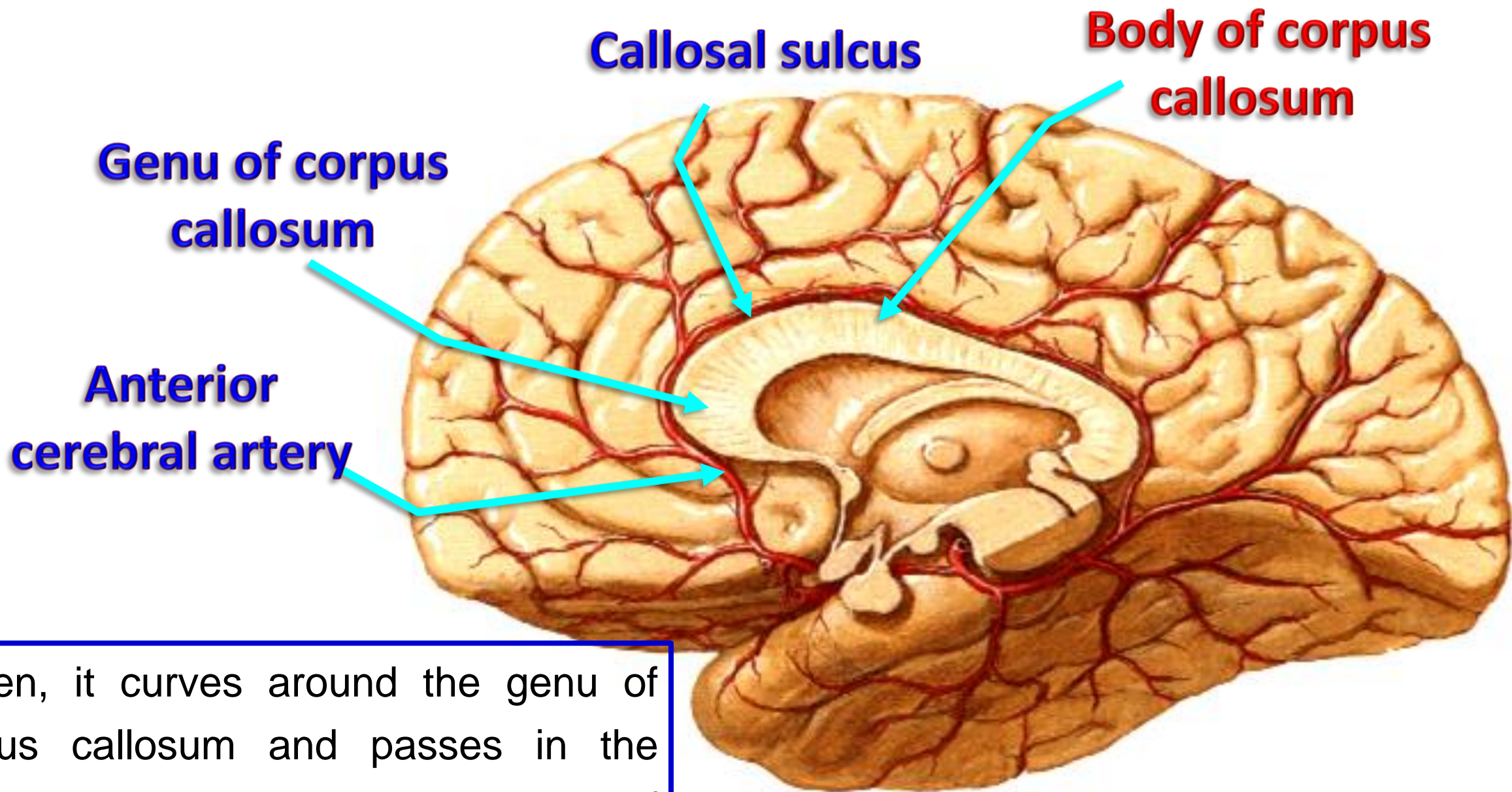
** **Course:**

- It passes medially above optic nerve to median longitudinal fissure.

- It communicates with the opposite side by anterior communicating

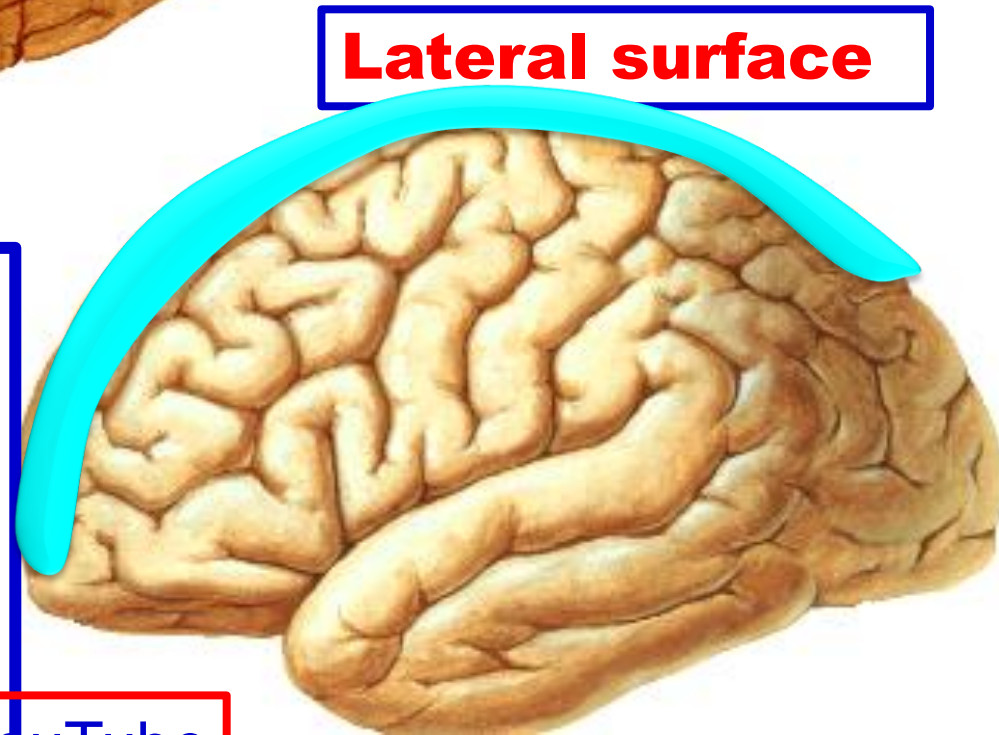
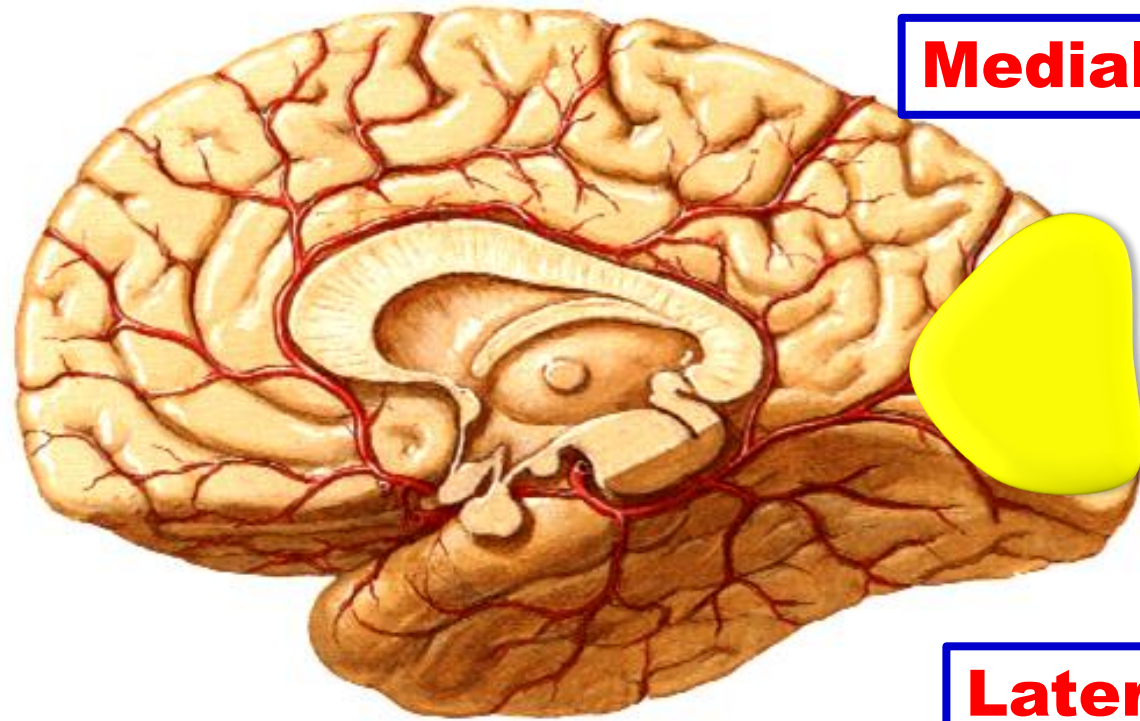
artery. [Prof. Dr. Youssef Hussein Anatomy - YouTube](#)





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

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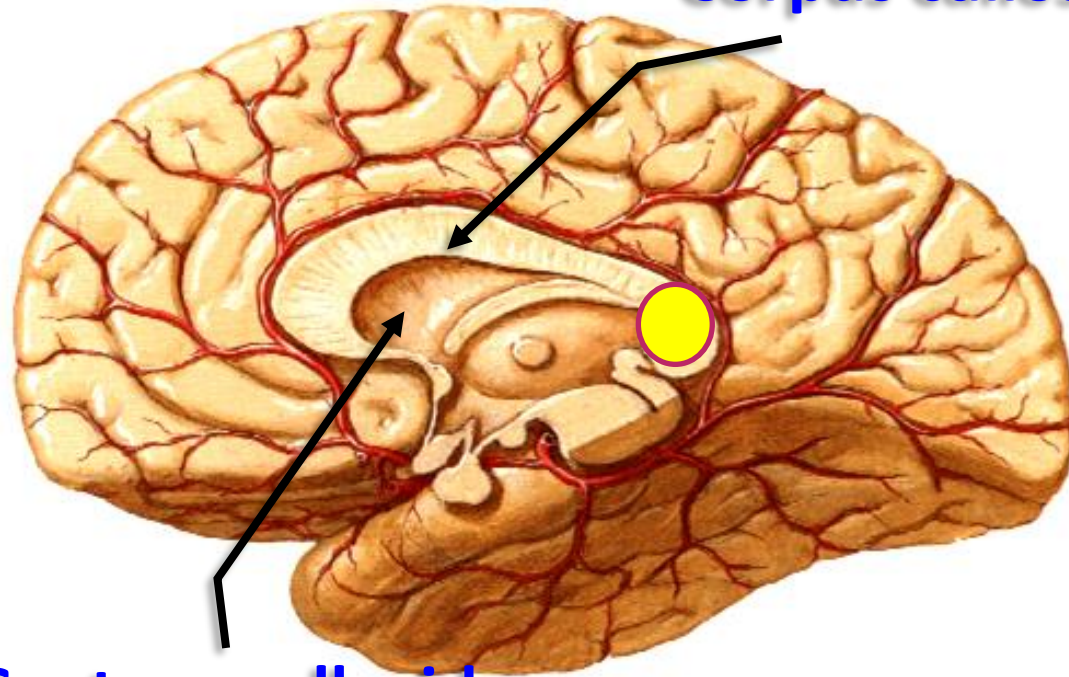
- **Cortical branches of anterior cerebral artery,**

a- Medial surface except the occipital lobe.

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

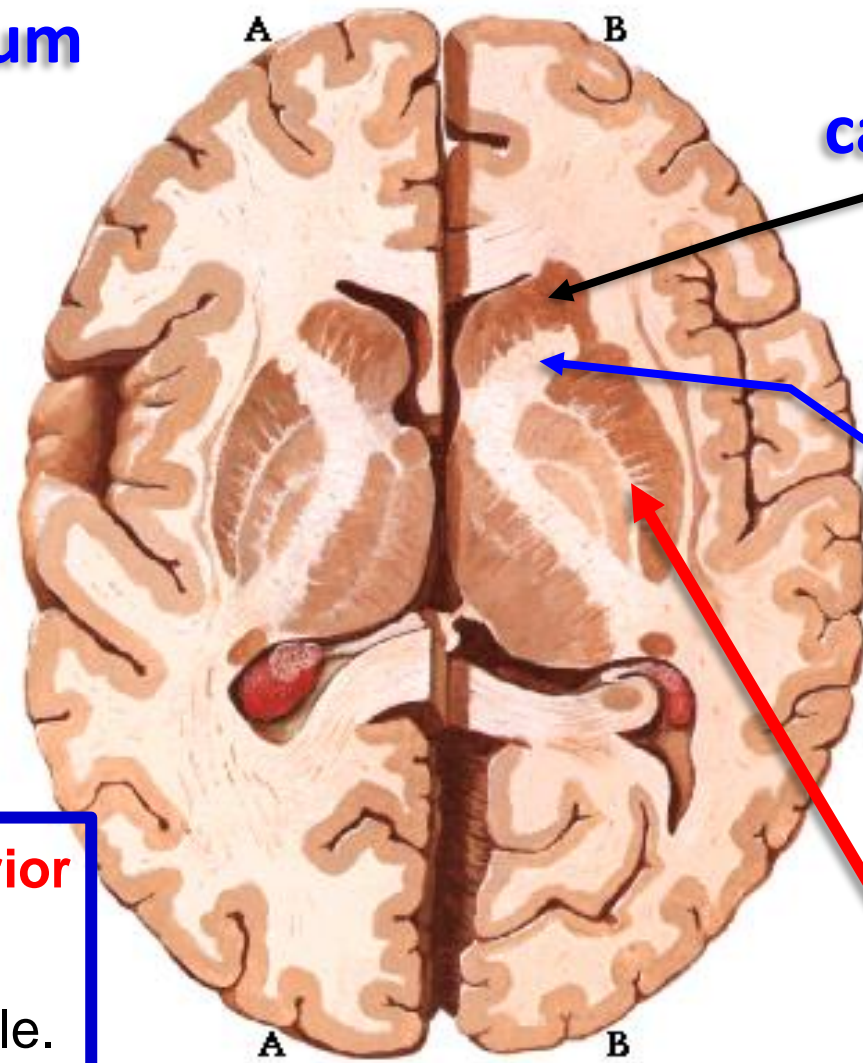
c- Medial part (1/3) of the orbital surface on the inferior surface.

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.

Middle cerebral Artery

Middle cerebral artery

Posterior ramus of lateral sulcus

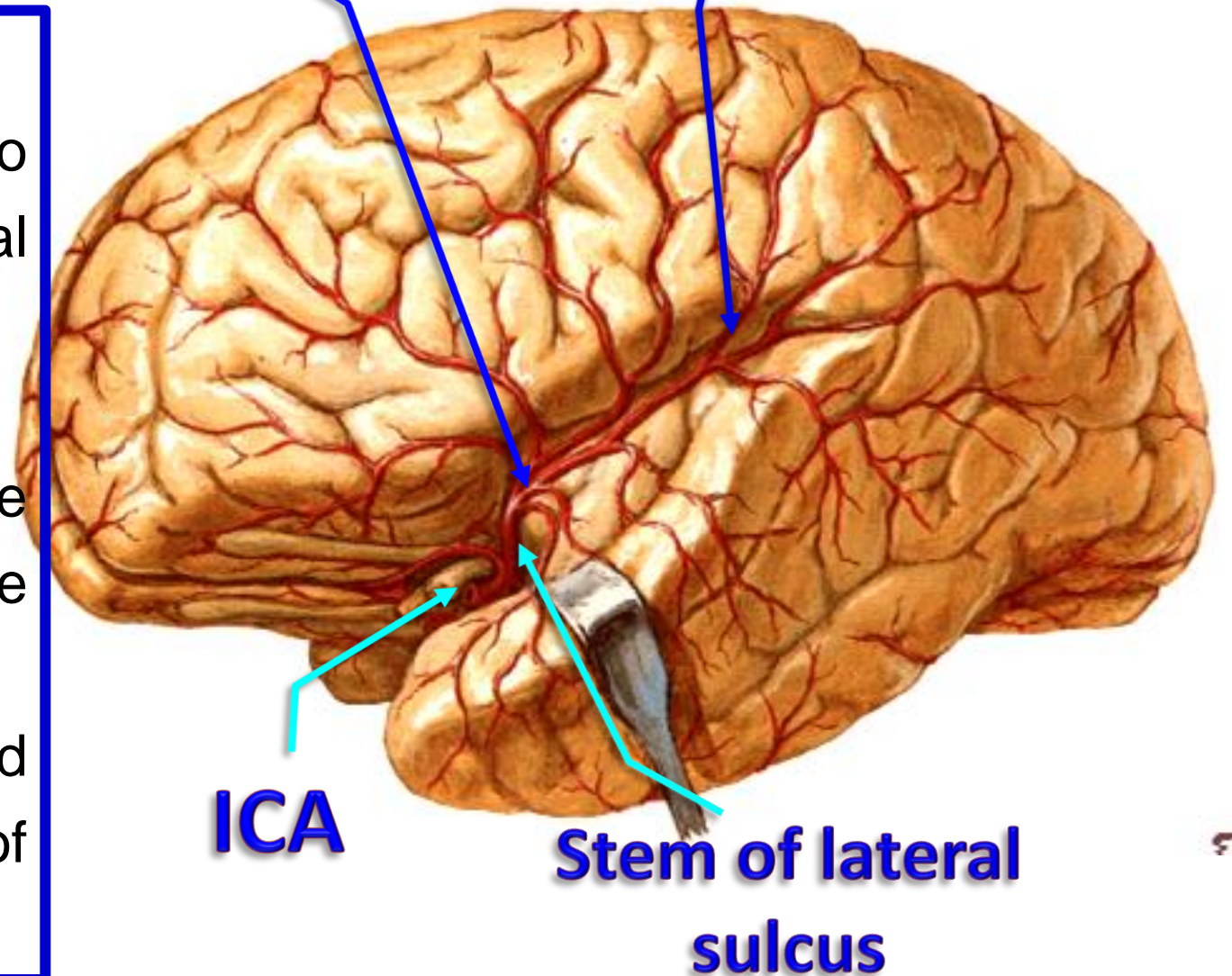
- **Middle Cerebral Artery**

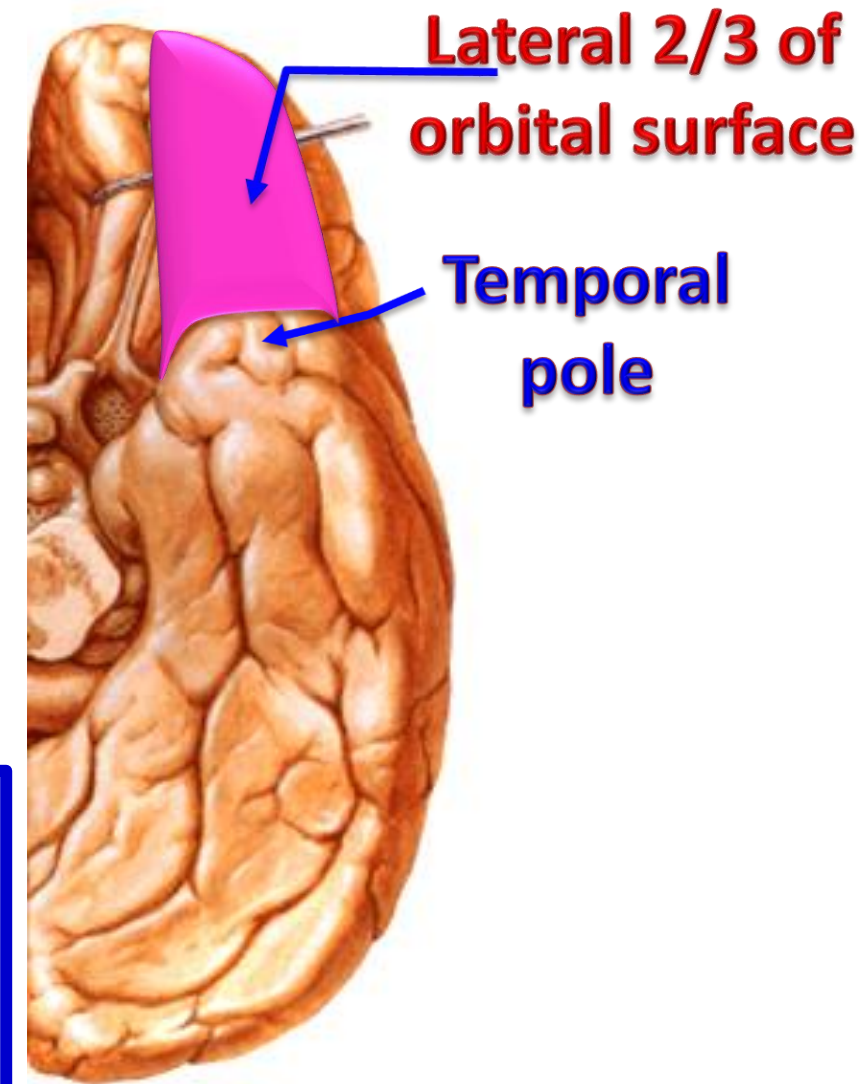
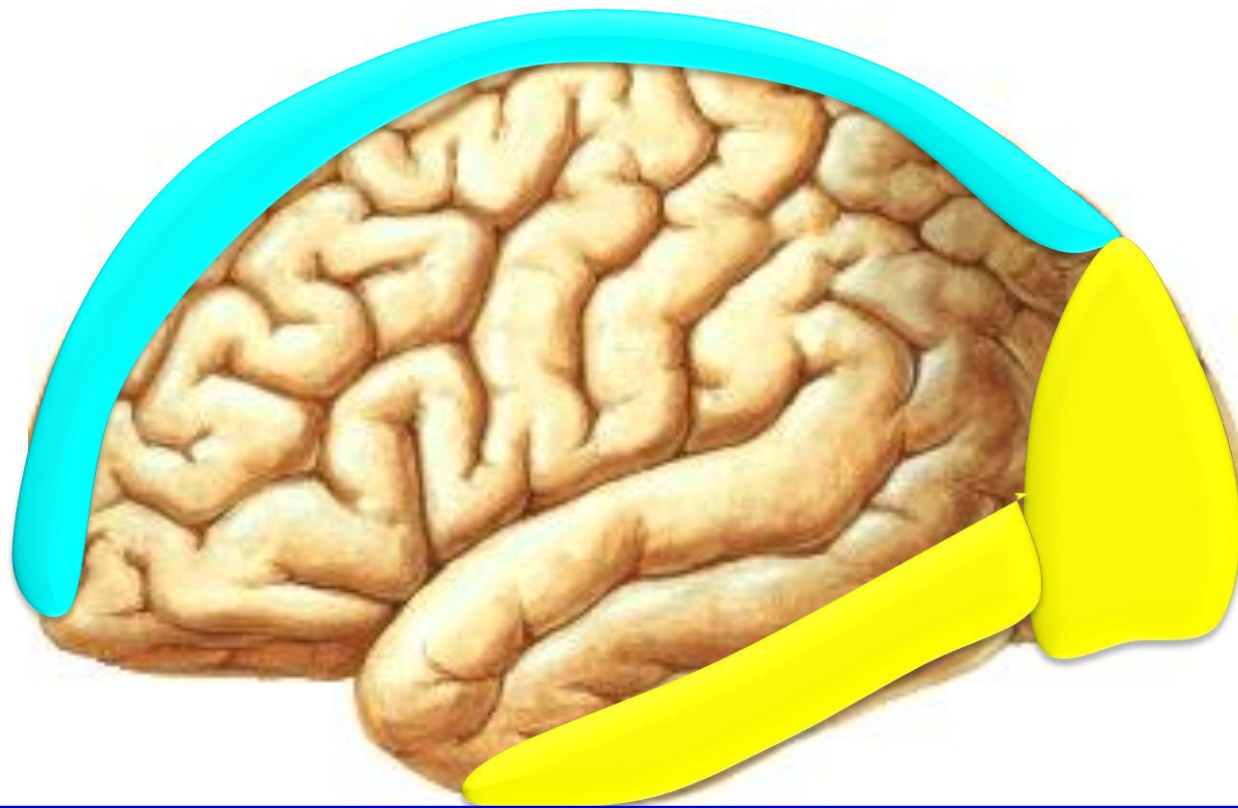
**** Origin:** is the larger of the two terminal branches of the internal carotid artery.

**** 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 inch (by anterior cerebral artery).

b- Lower part (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**.

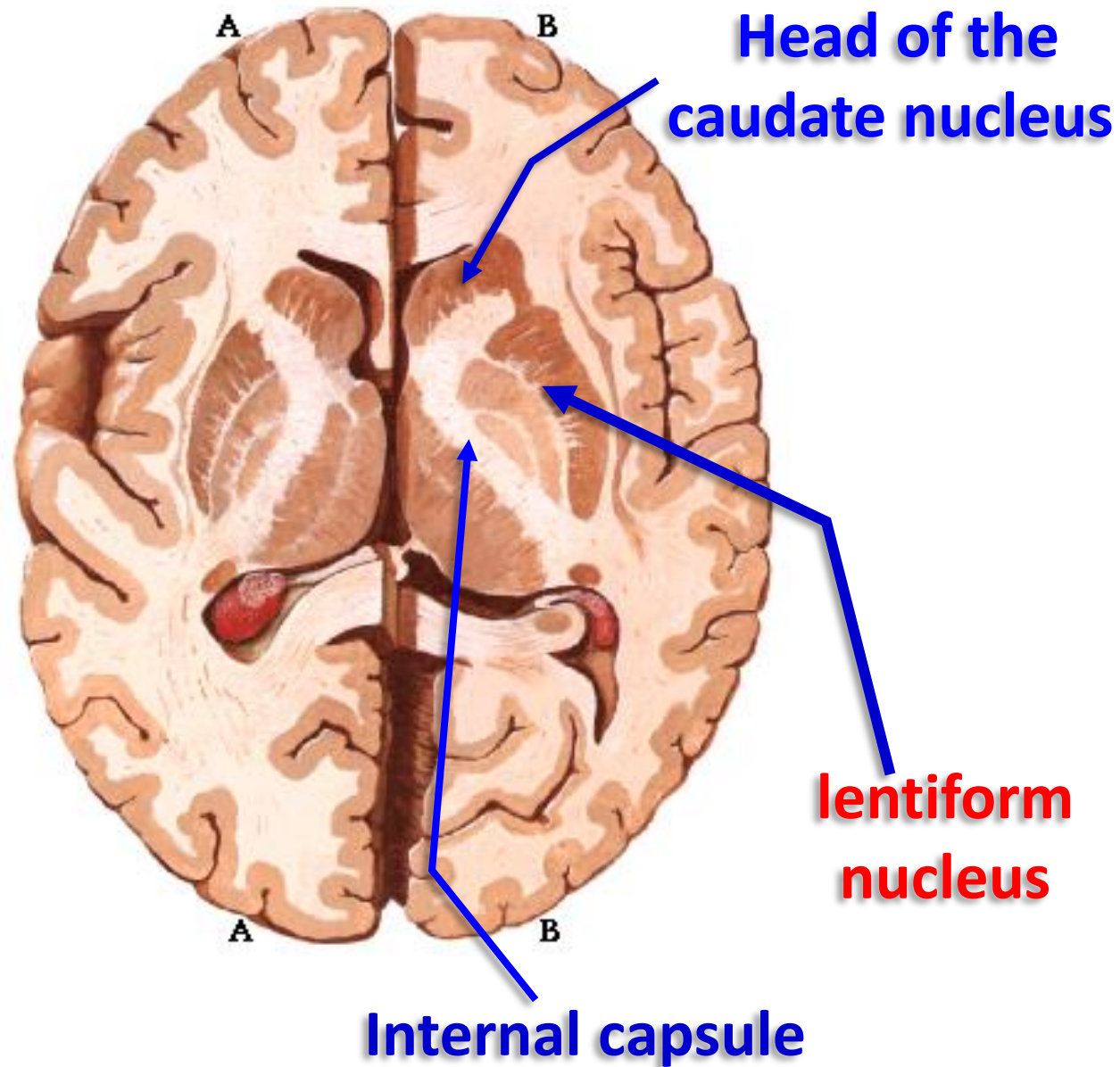
3- **Temporal pole**.

- **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

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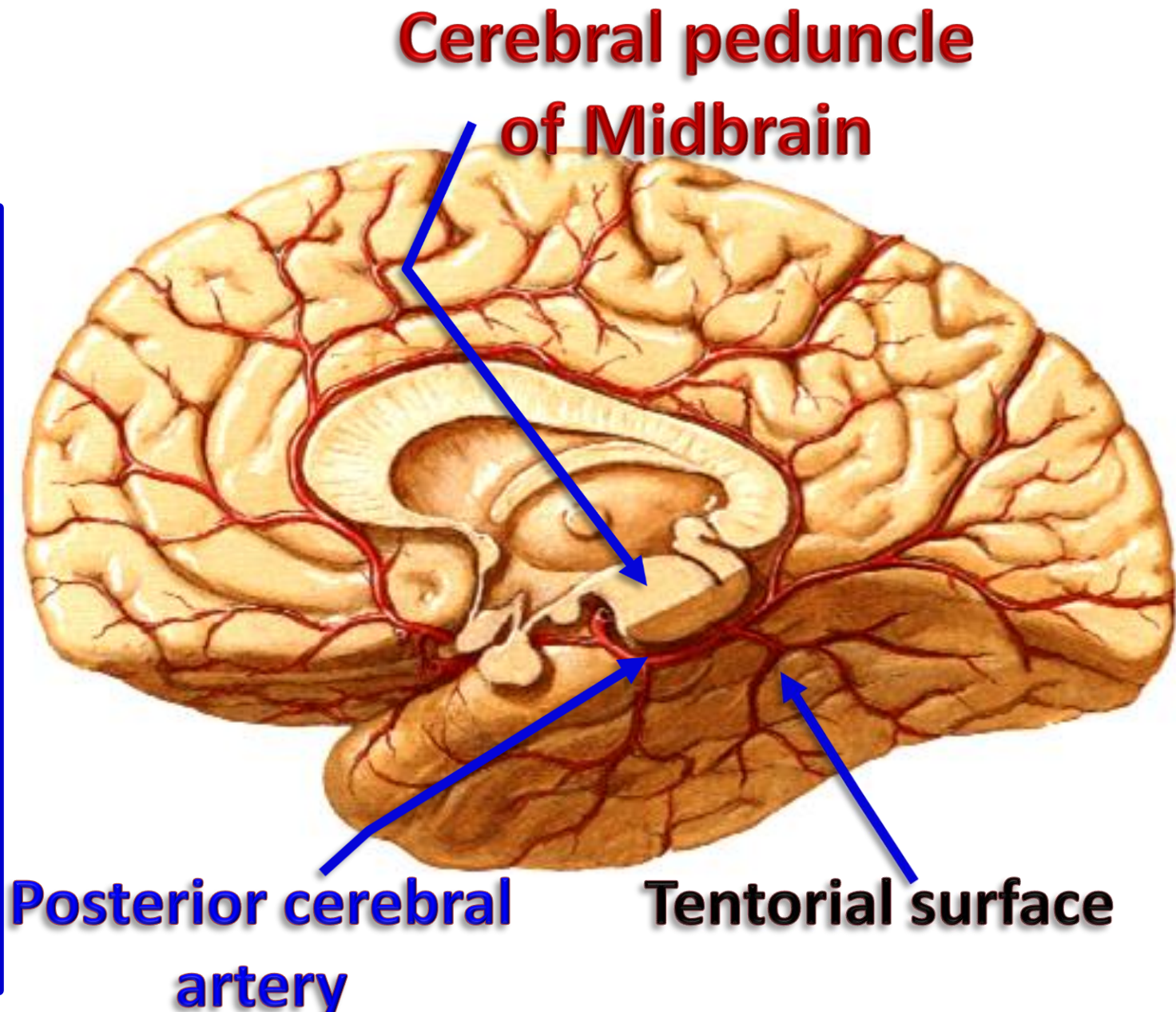
- **Posterior Cerebral Artery**

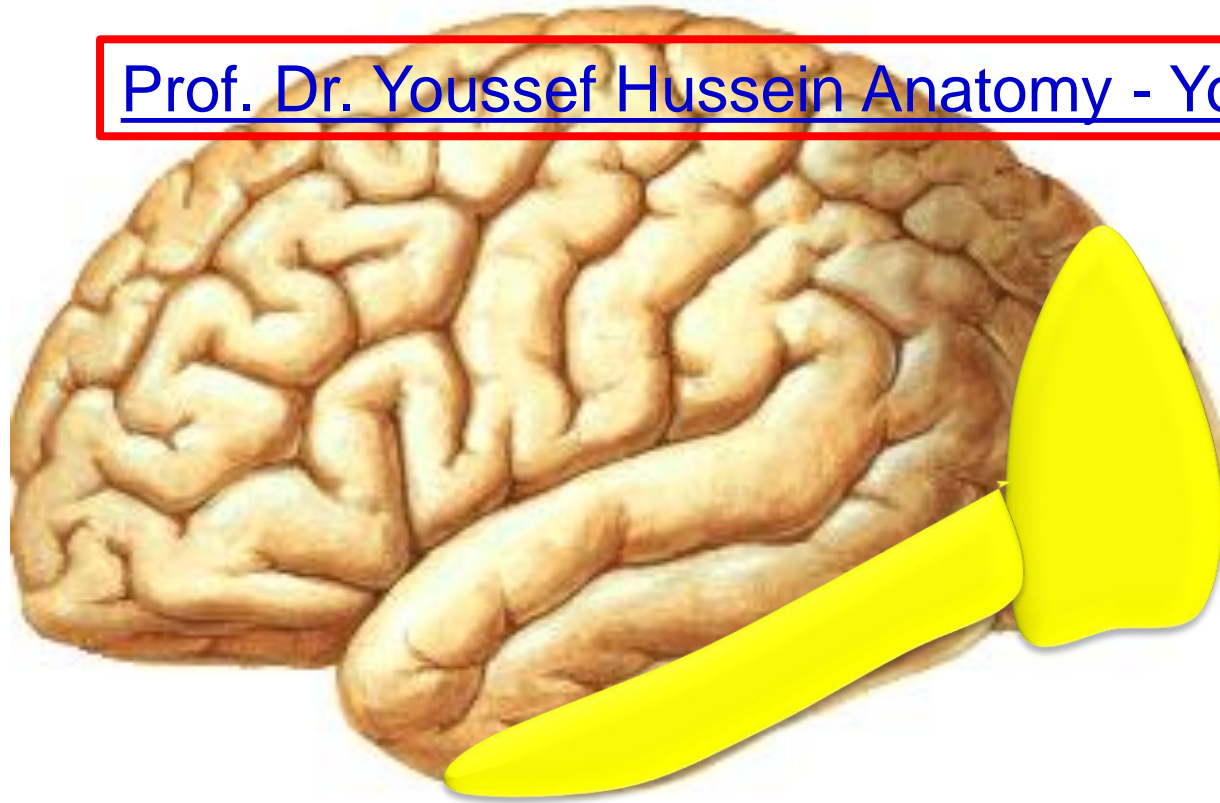
** **Origin:** one of the two terminal branches of the basilar artery.

** **Course;**

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

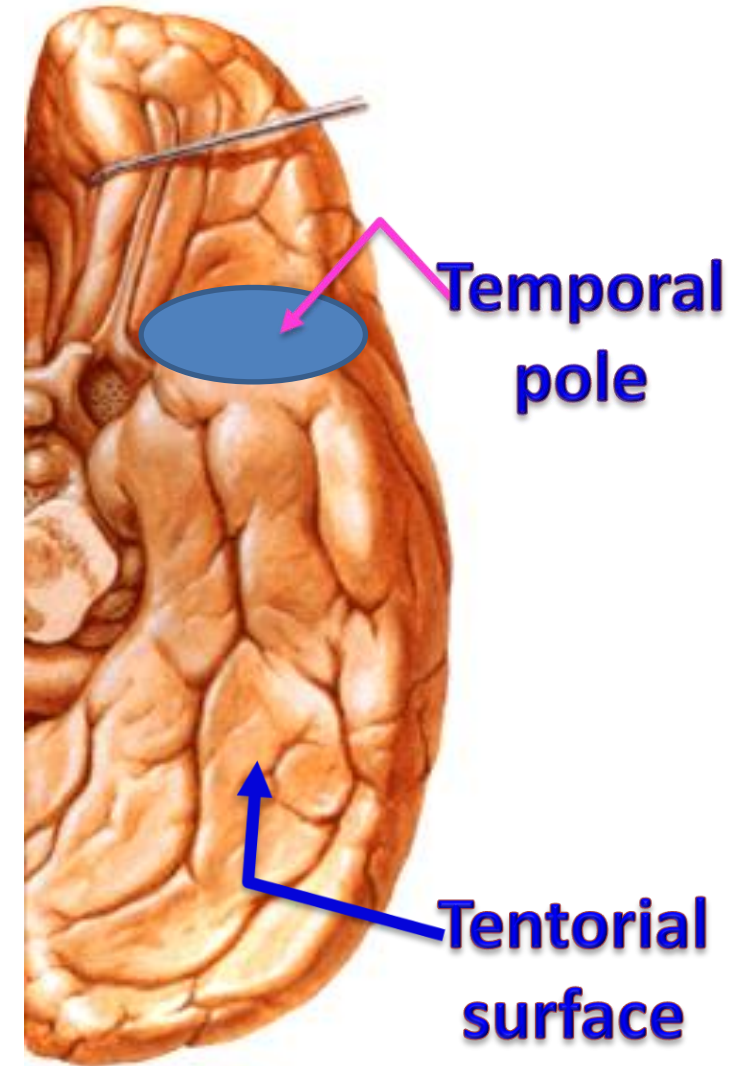
- It runs backward to reach the occipital pole.





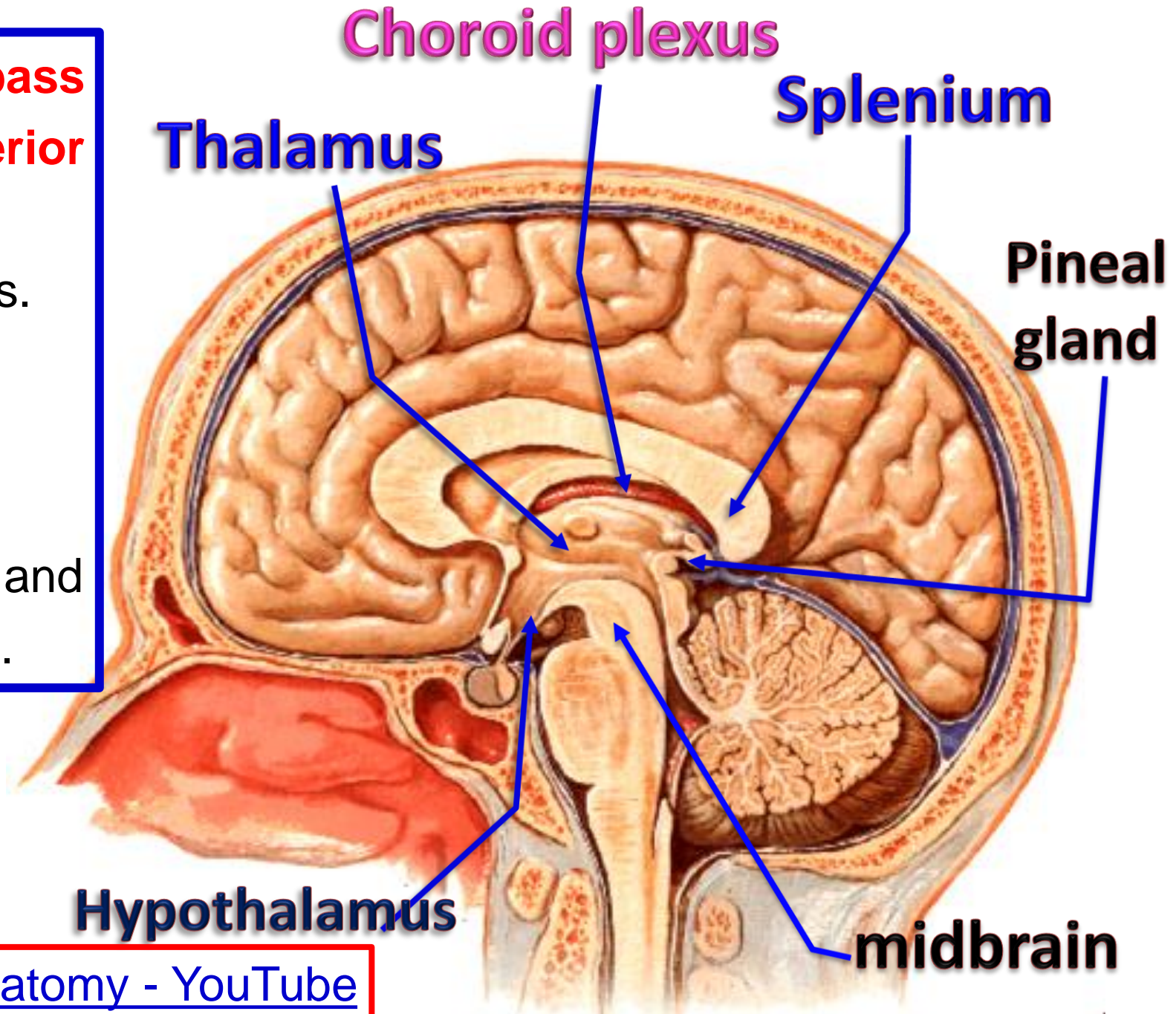
- **Cortical branches of Posterior cerebral artery**

- 1- All surfaces of the occipital lobe (**visual center**)
- 2- One finger breadth on the superolateral surface along the inferior border.
- 3- **Tentorial surface** of the cerebral hemisphere **except** temporal pole.

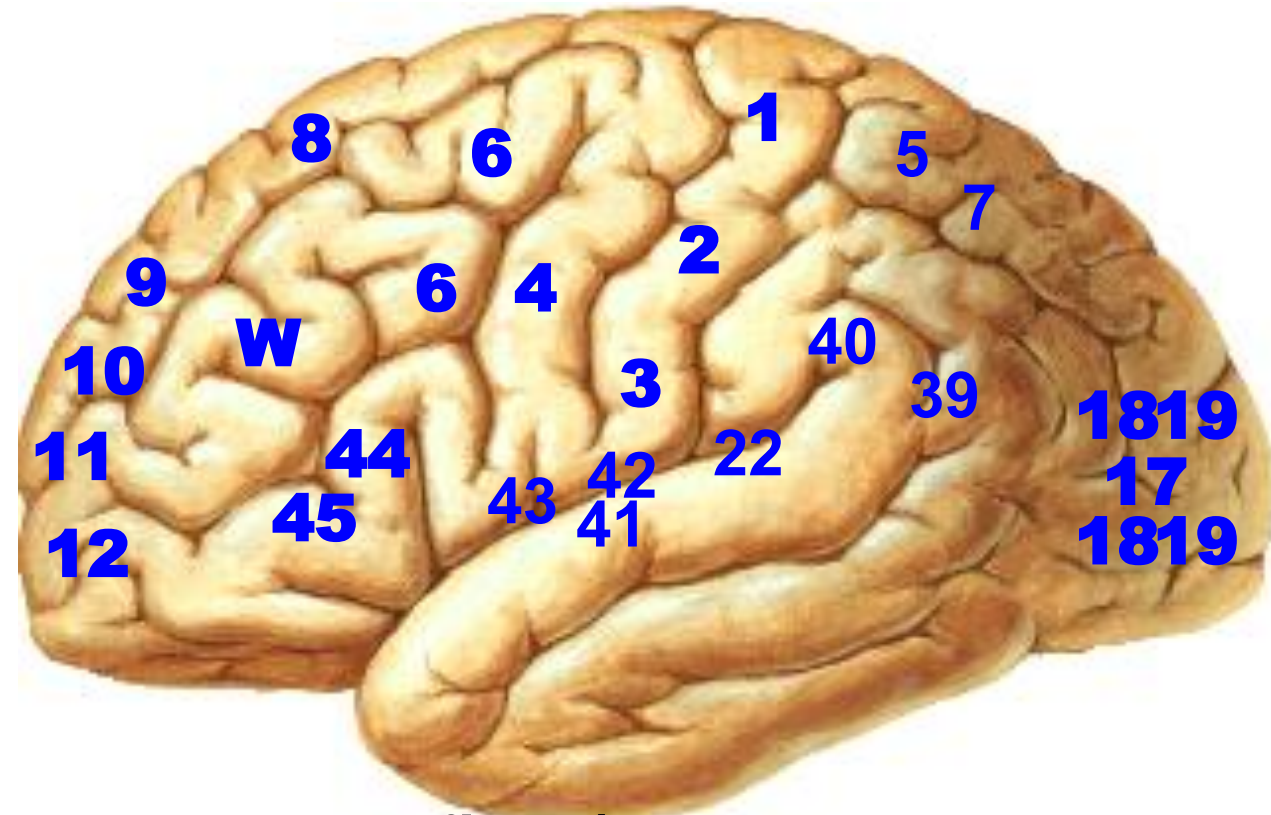


- **Central branches; pass through the posterior perforated substance**

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



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Frontal eye field (Brodmann area 8
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41,42 primary auditory
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Gustatory area (area 43): insula

- **Anterior cerebral artery stroke**

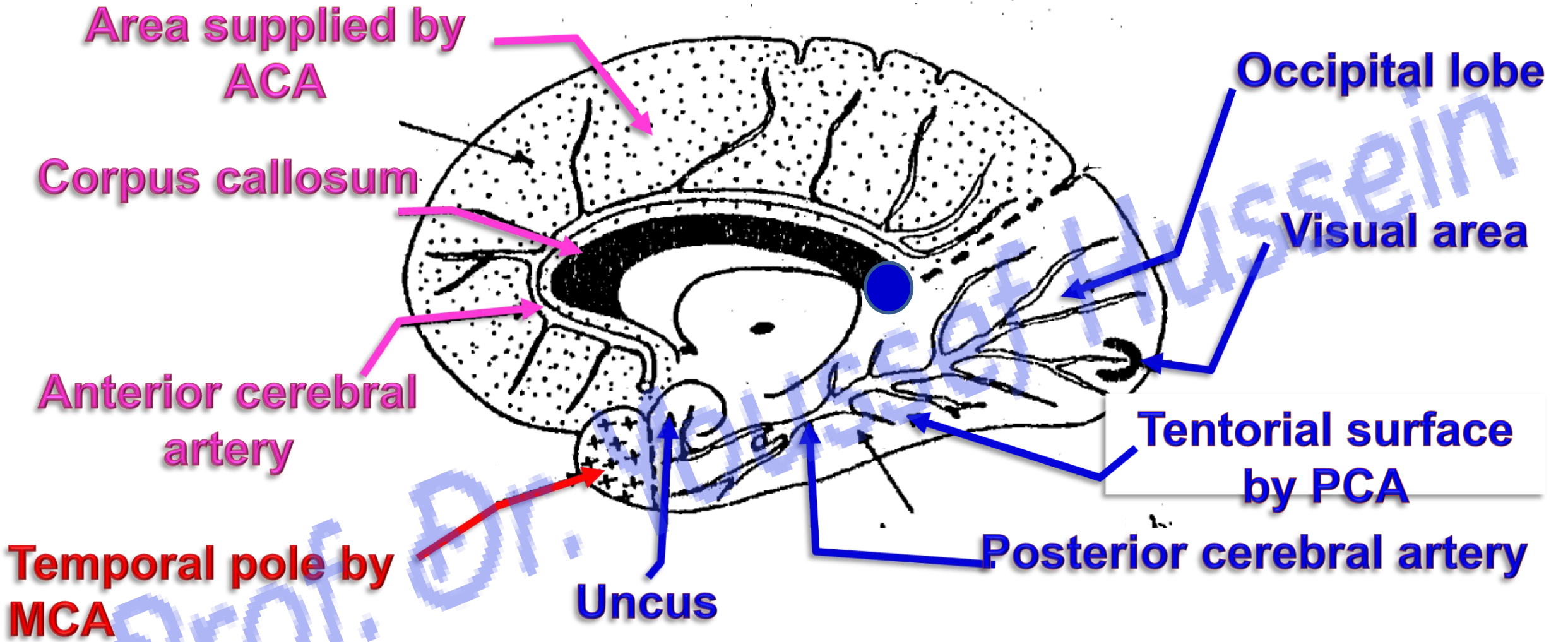
- **Motor and sensory cortices (lower limb) -----Contralateral paralysis and sensory loss of lower limb, urinary incontinence.**

- **Middle cerebral artery**

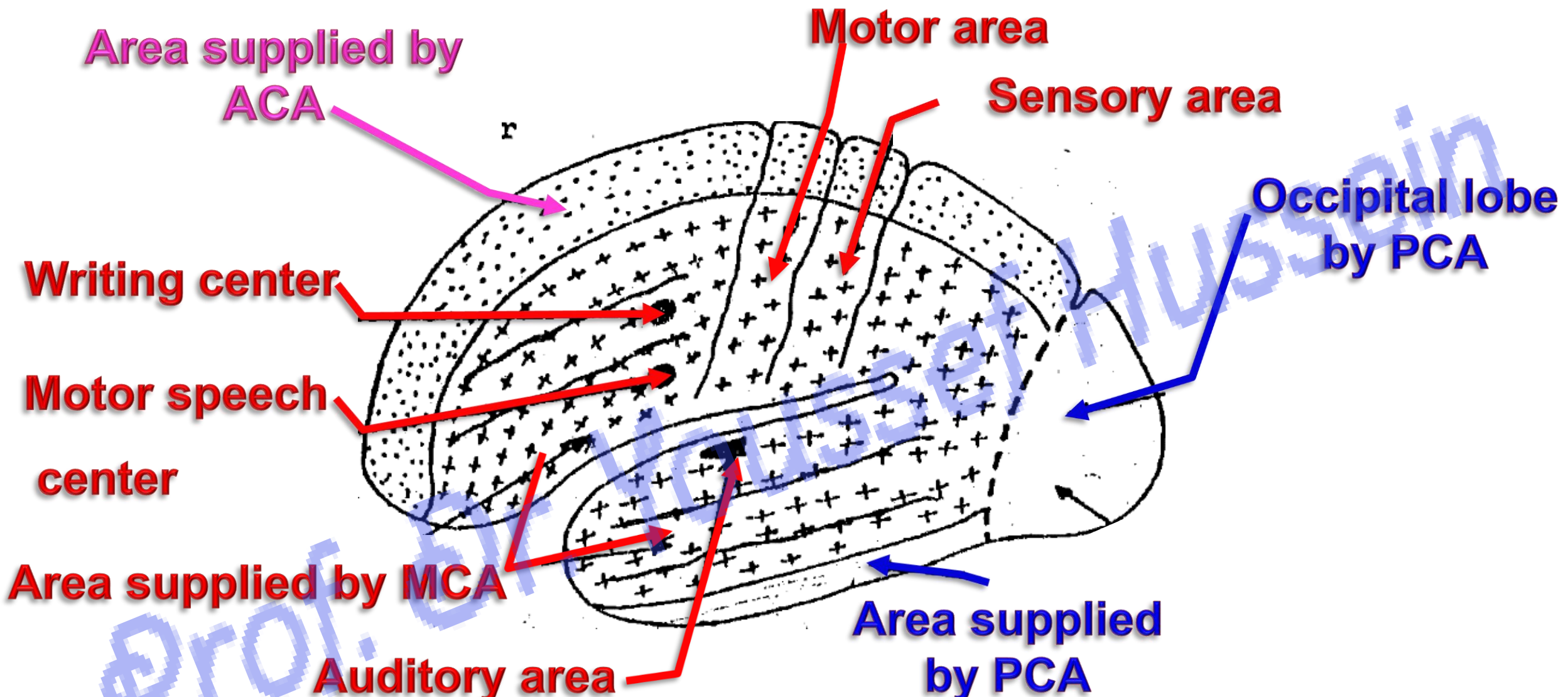
- **Motor and sensory cortices (upper limb and face)----- Contralateral paralysis and sensory loss of lower face and upper limb.,**
- **Temporal lobe (Wernicke area); frontal lobe (Broca area).**
 - **Aphasia if in dominant (usually left) hemisphere.**
 - **Neglect if lesion affects nondominant (usually right) hemisphere.**
- **Wernicke aphasia is associated with contralateral superior quadrant visual field defect (quadrant anopsia) due to temporal lobe involvement. The middle cerebral artery also supplies the proximal parts of the visual radiations as they emerge from the lateral geniculate nucleus. These fibers course into the temporal lobe before looping posteriorly to rejoin the rest of the visual radiation fibers.**

- **Posterior cerebral artery**

- **Occipital lobe. ----- Contralateral hemianopia with macular sparing;**
- **Alexia without agraphia unable to read at all, However, they are able to write (pure word blindness) (dominant hemisphere, extending to splenium of corpus callosum);**
- **Prosopagnosia (nondominant hemisphere, face blindness unable to recognize faces, despite having healthy vision).**



Medial surface of right cerebral hemisphere



Superolateral surface of left cerebral hemisphere

Area supplied by
ACA

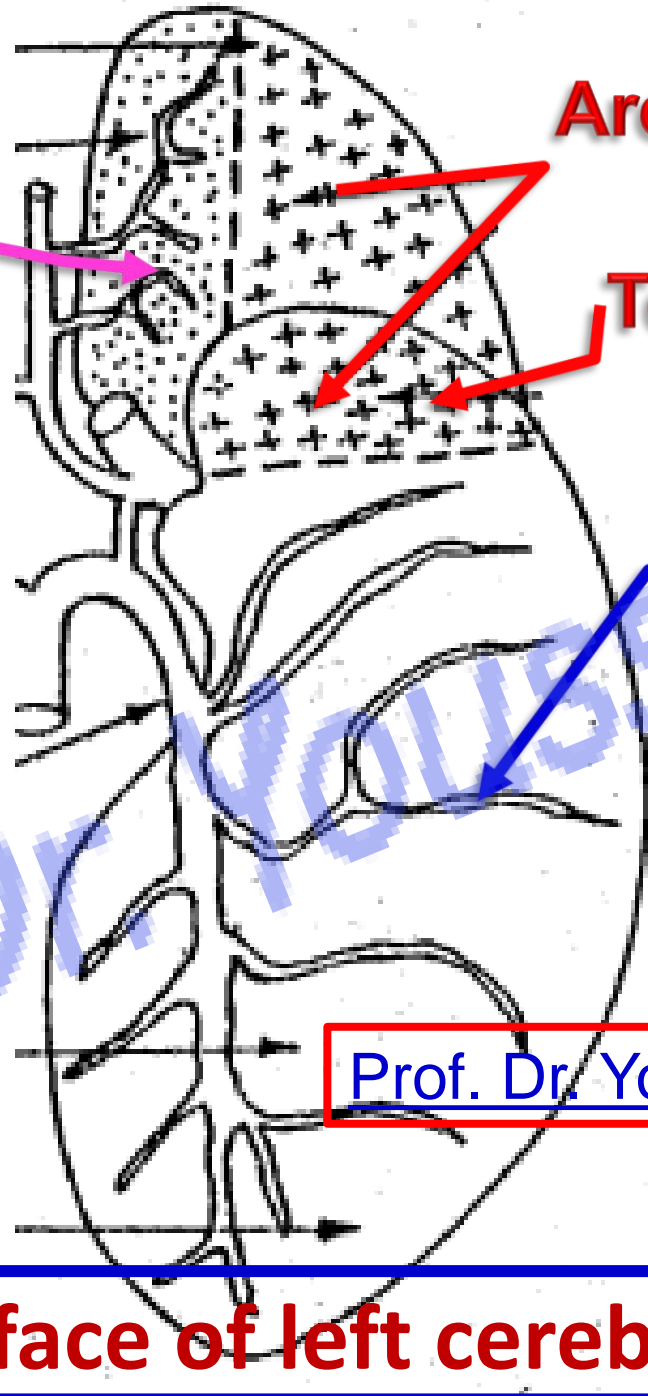
Area supplied by MCA

Temporal pole

Tentorial surface
by PCA

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Inferior surface of left cerebral hemisphere



Circle of Willis

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Circle of Willis

**Ant. communicating
Artery**

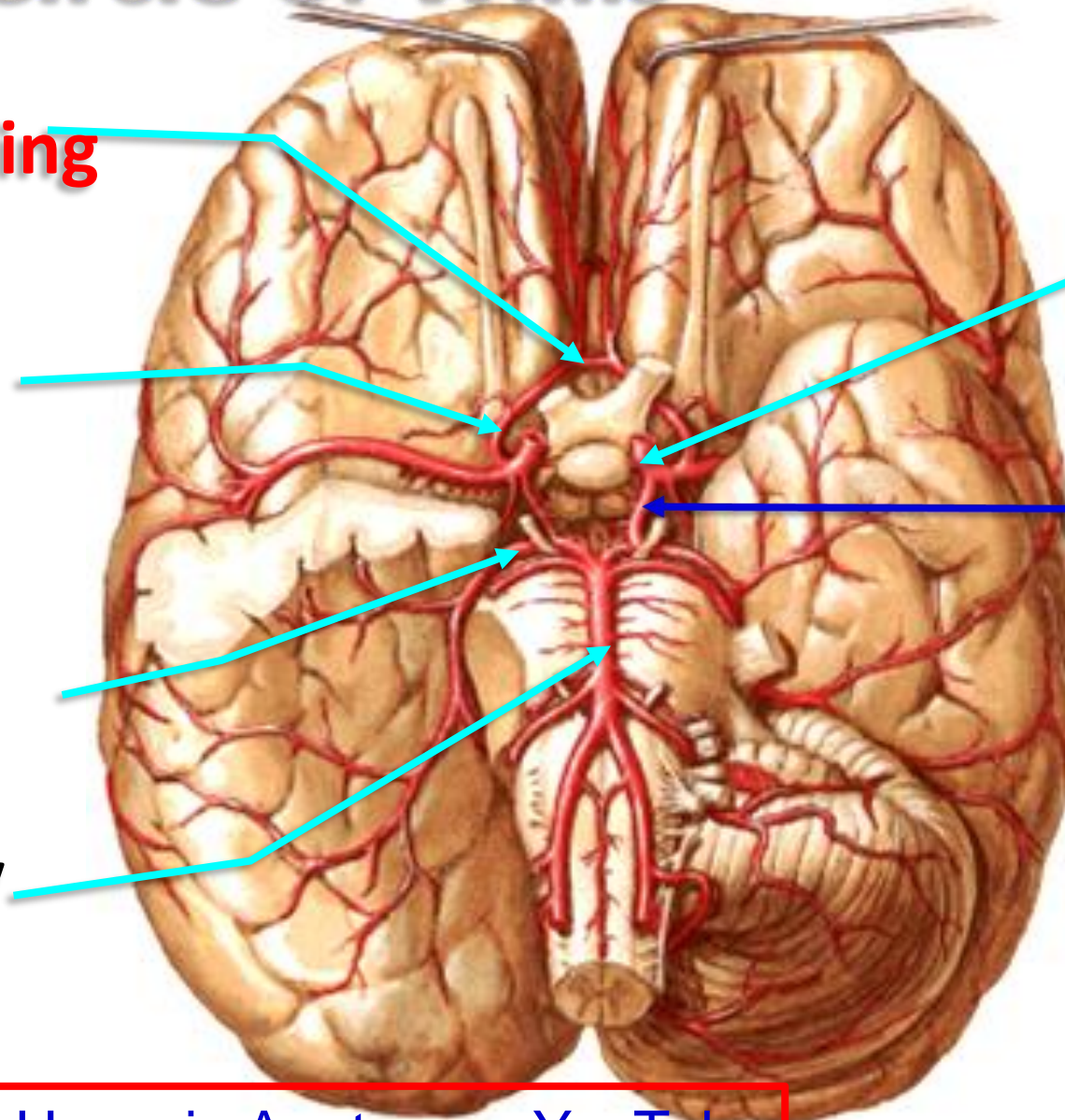
**Ant. cerebral
Artery**

**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.

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- **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.

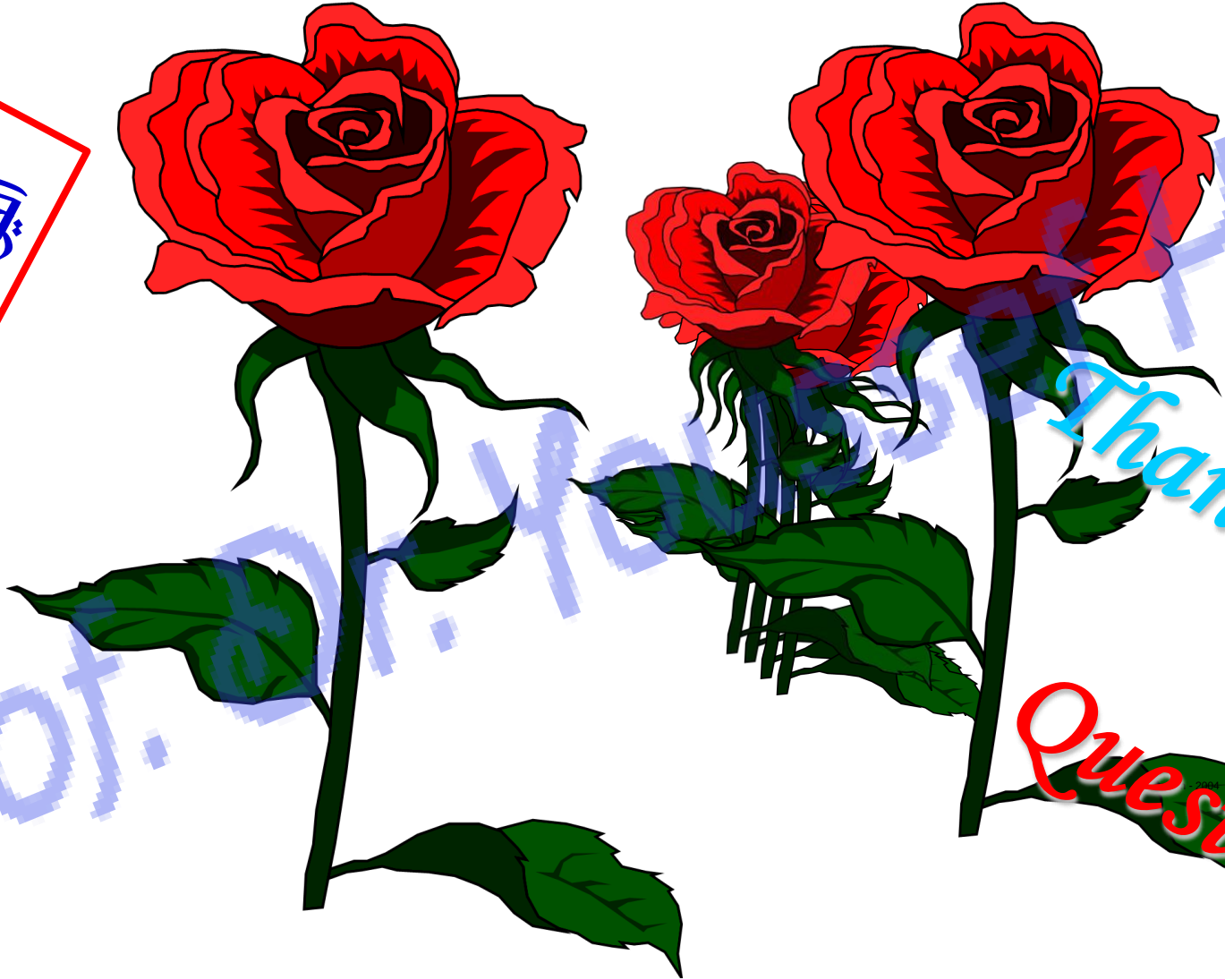
4- Two posterior cerebral arteries terminal branches of basilar artery.

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

https://www.youtube.com/channel/UCVSNqbibj9UWYaJdd_cn0PQ

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Thank You

Questions

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