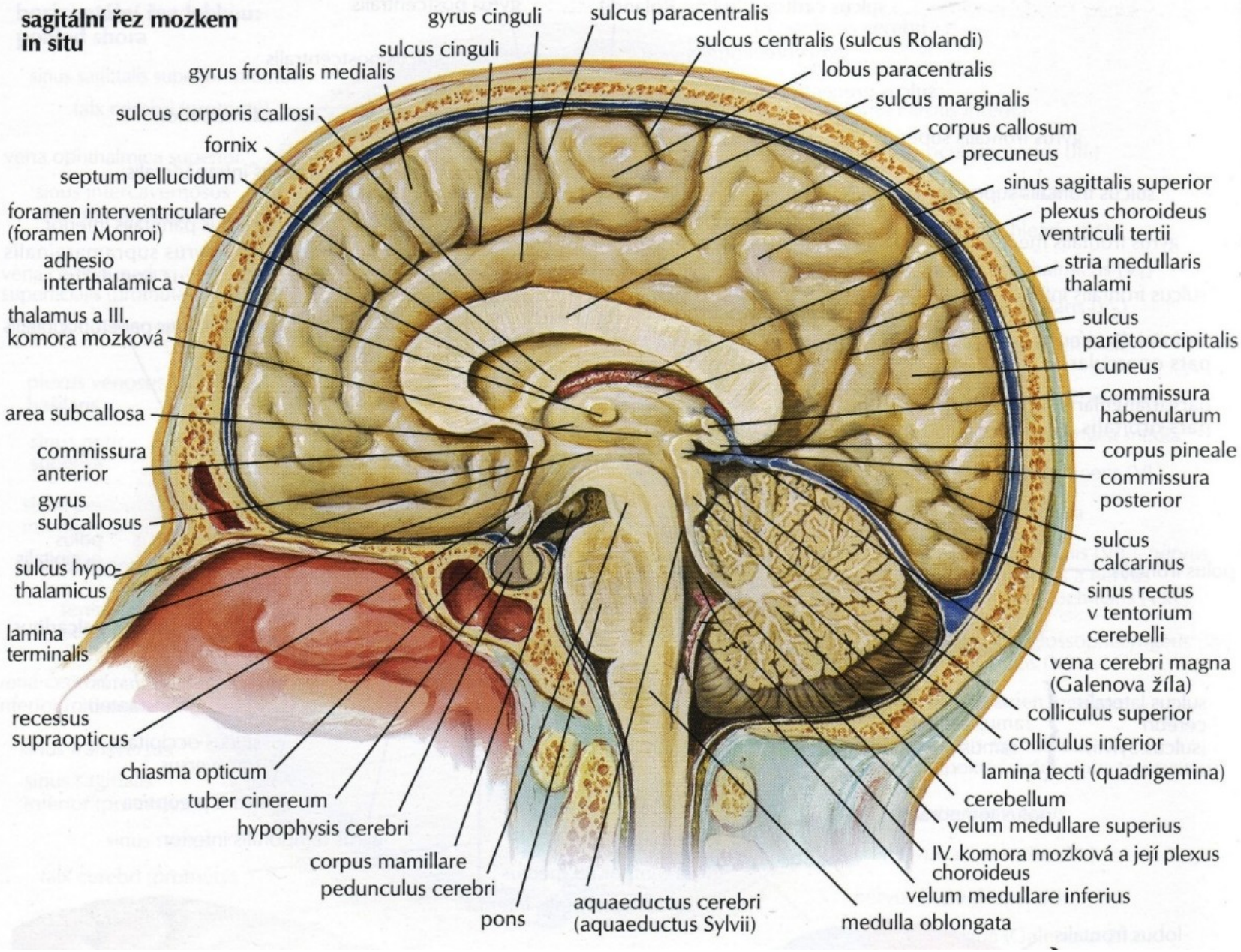
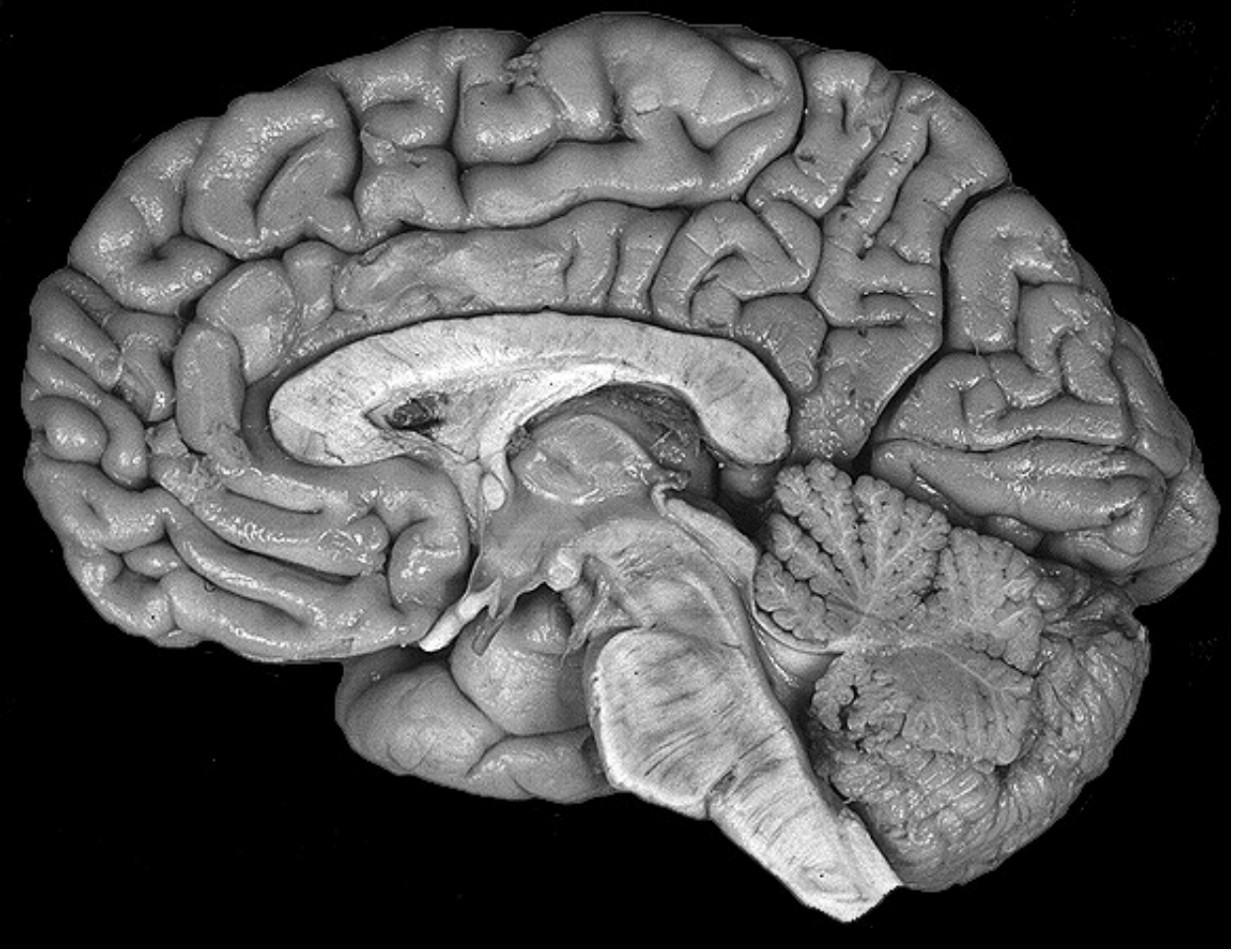
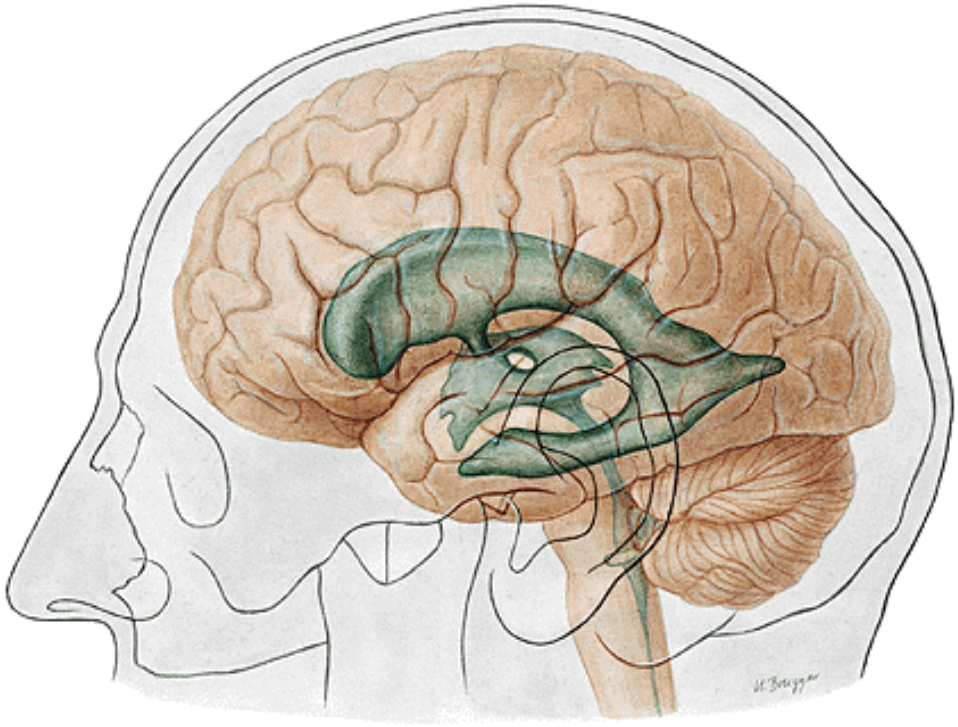
Komory, obaly a cévní zásobení CNS

sagitální řez mozkem in situ





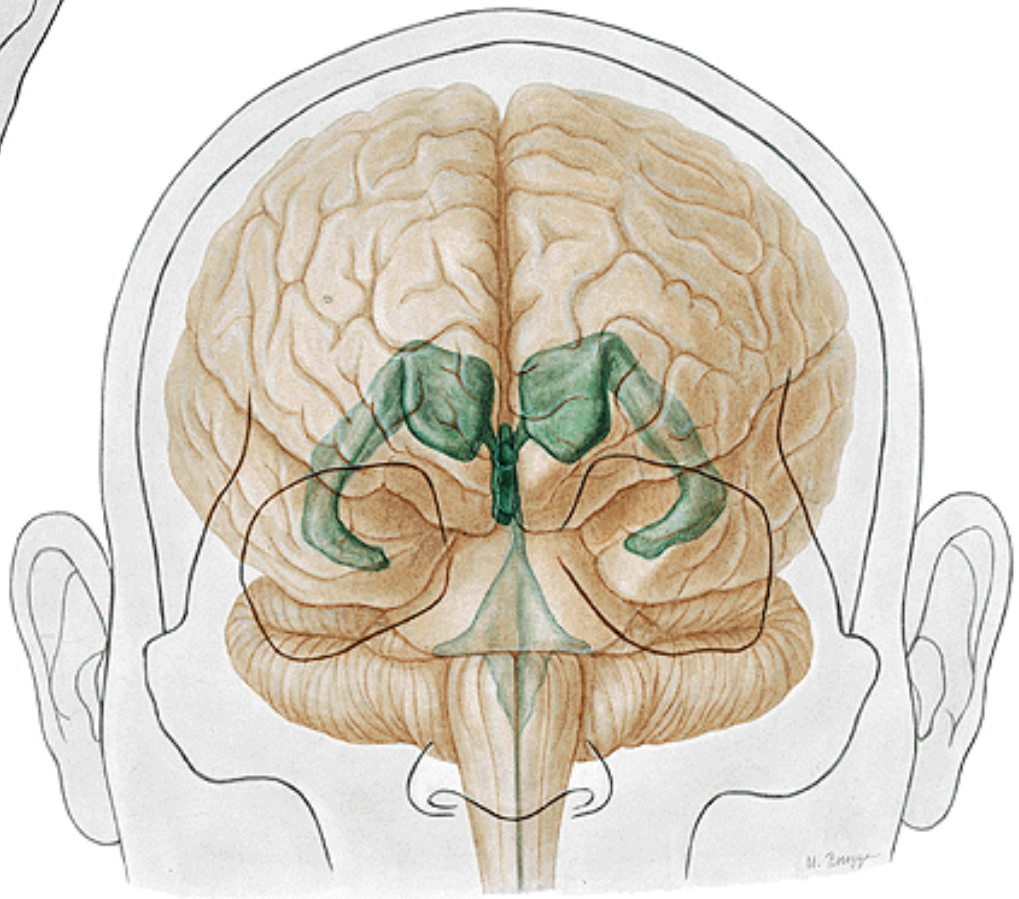


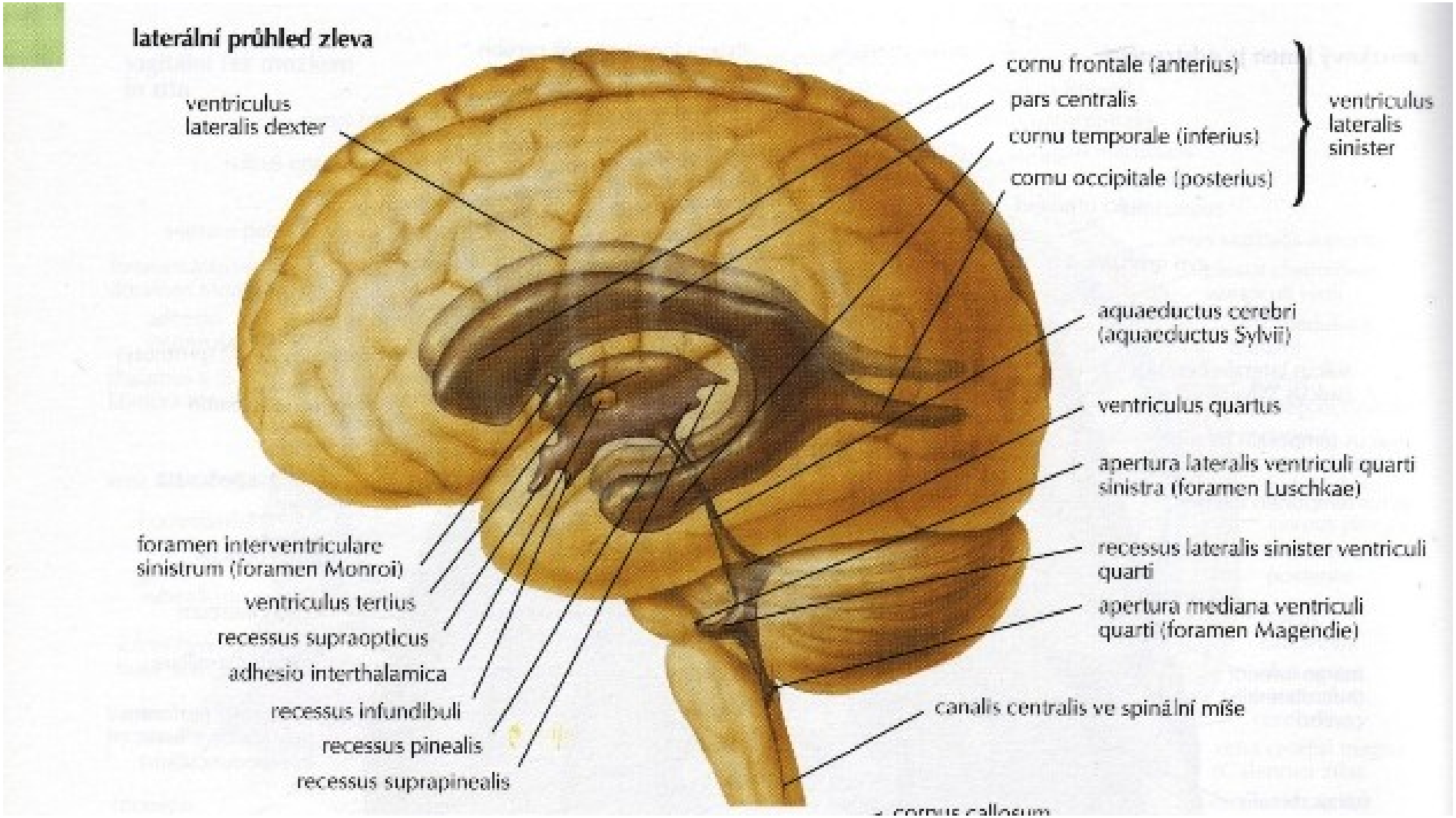
cornu frontale

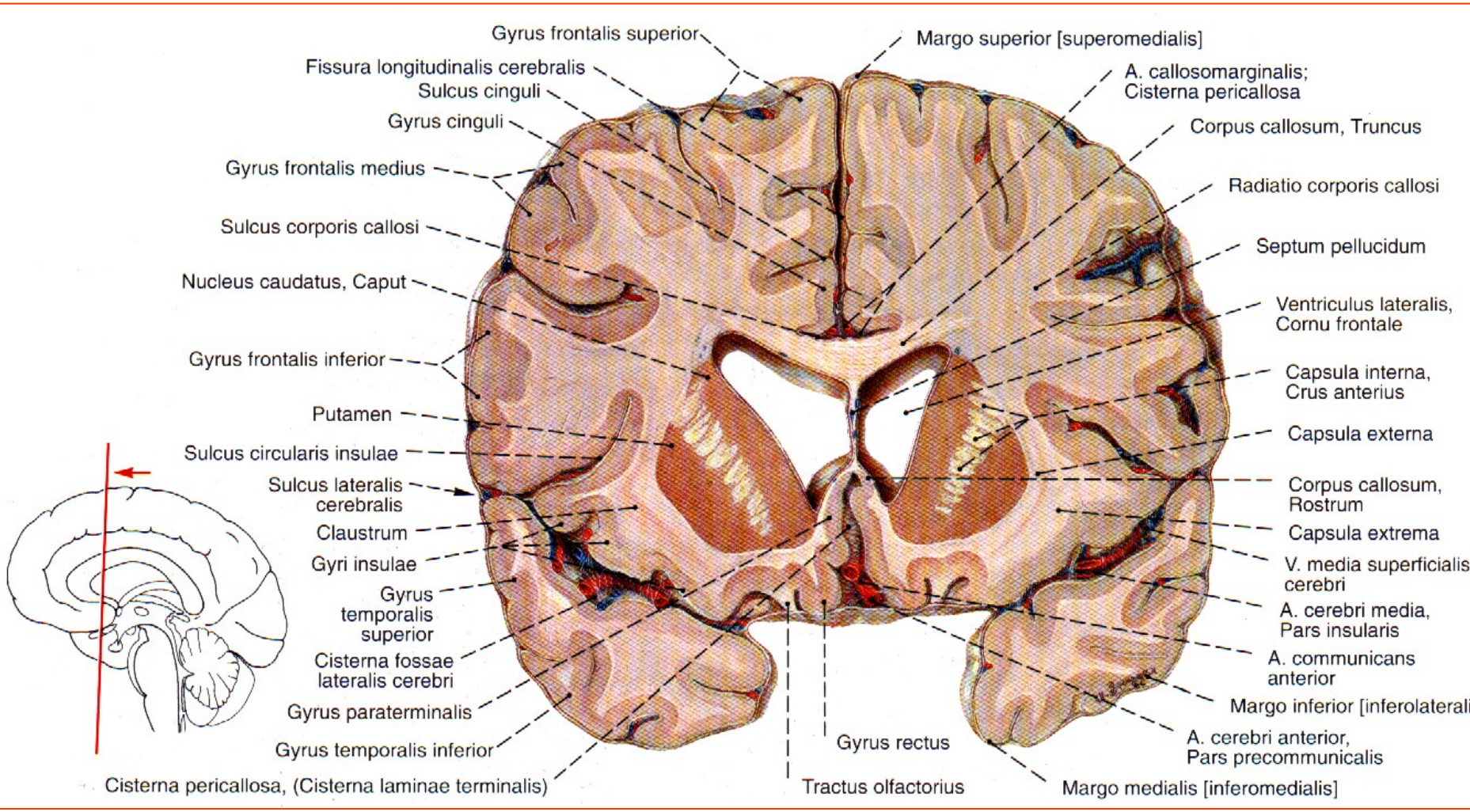
pars centralis

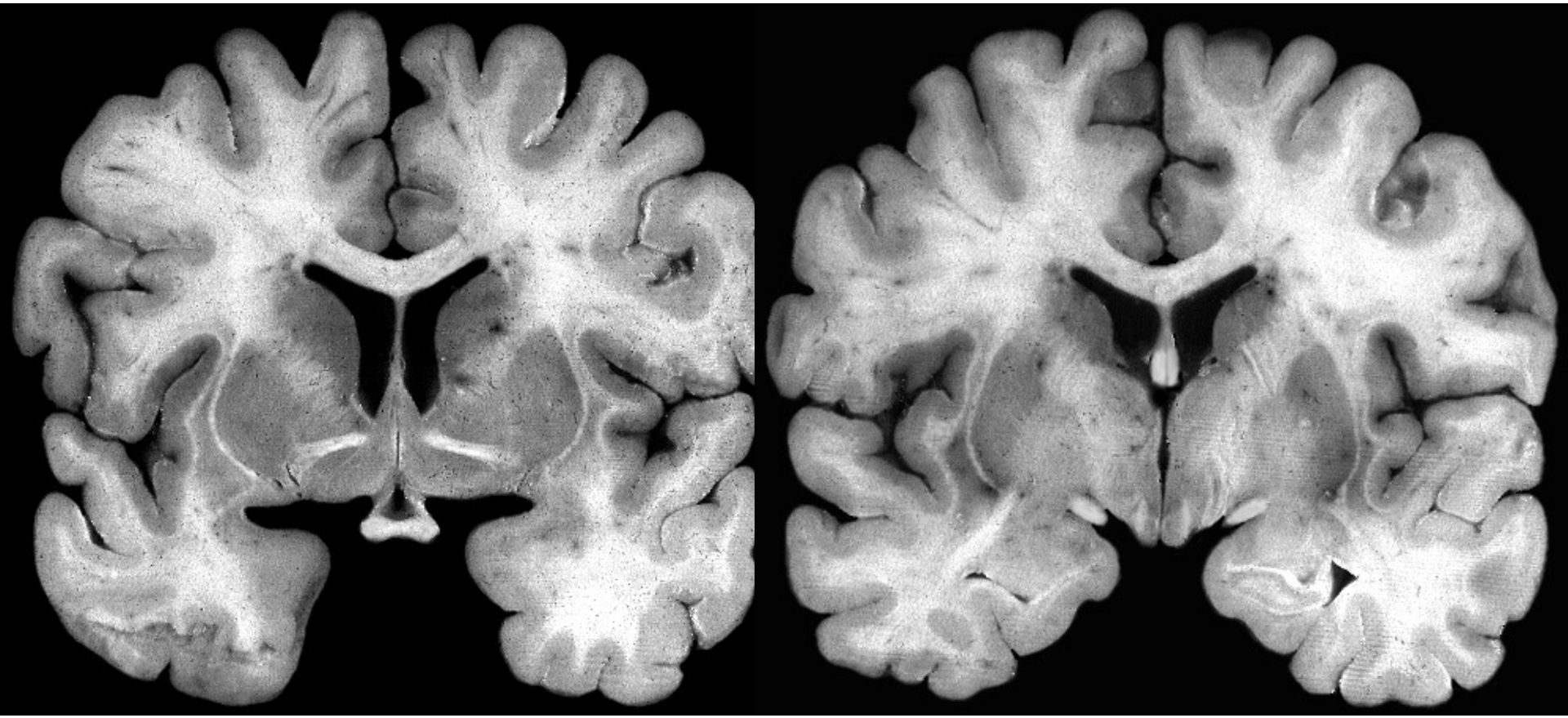
cornu occipitale

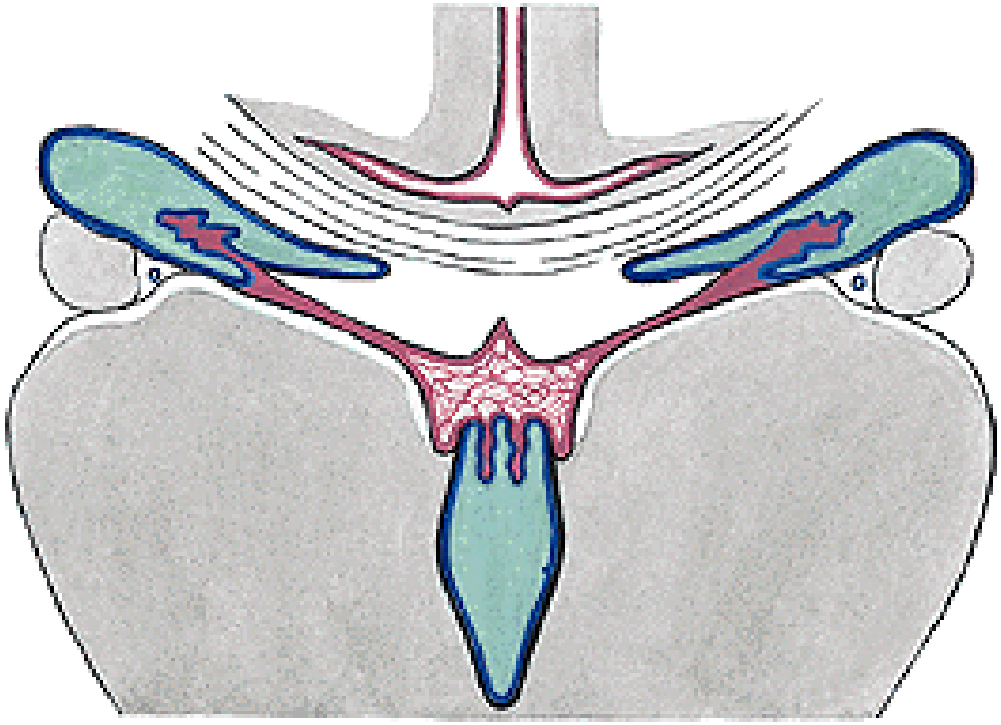
cornu temporale

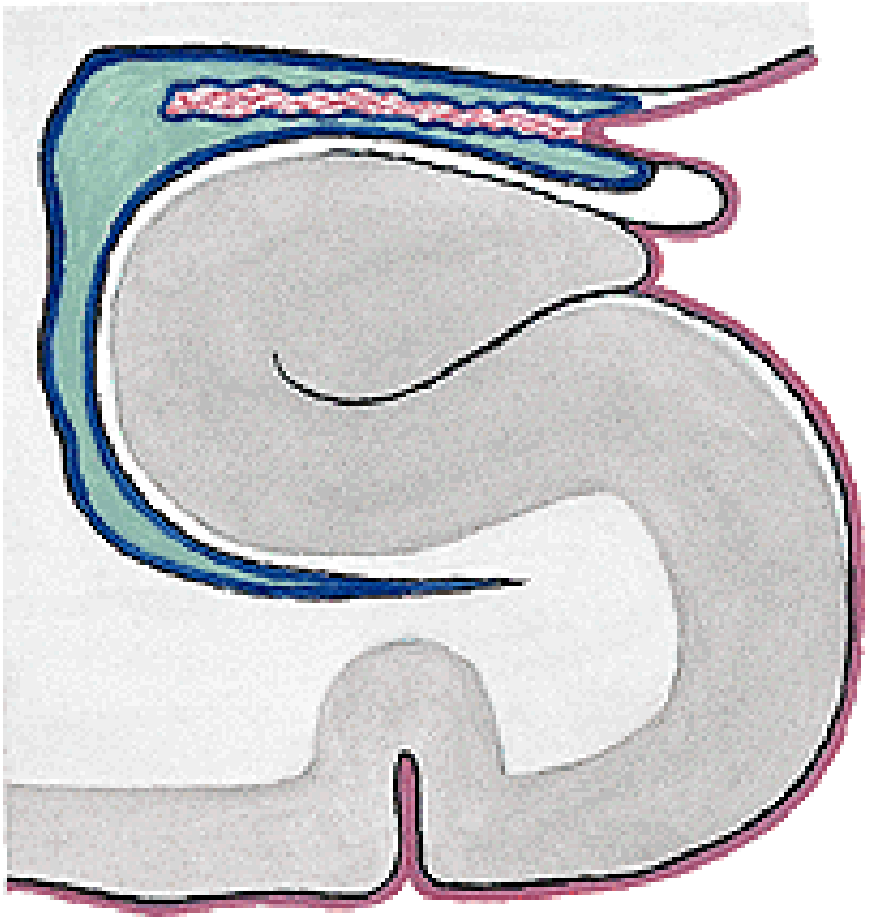


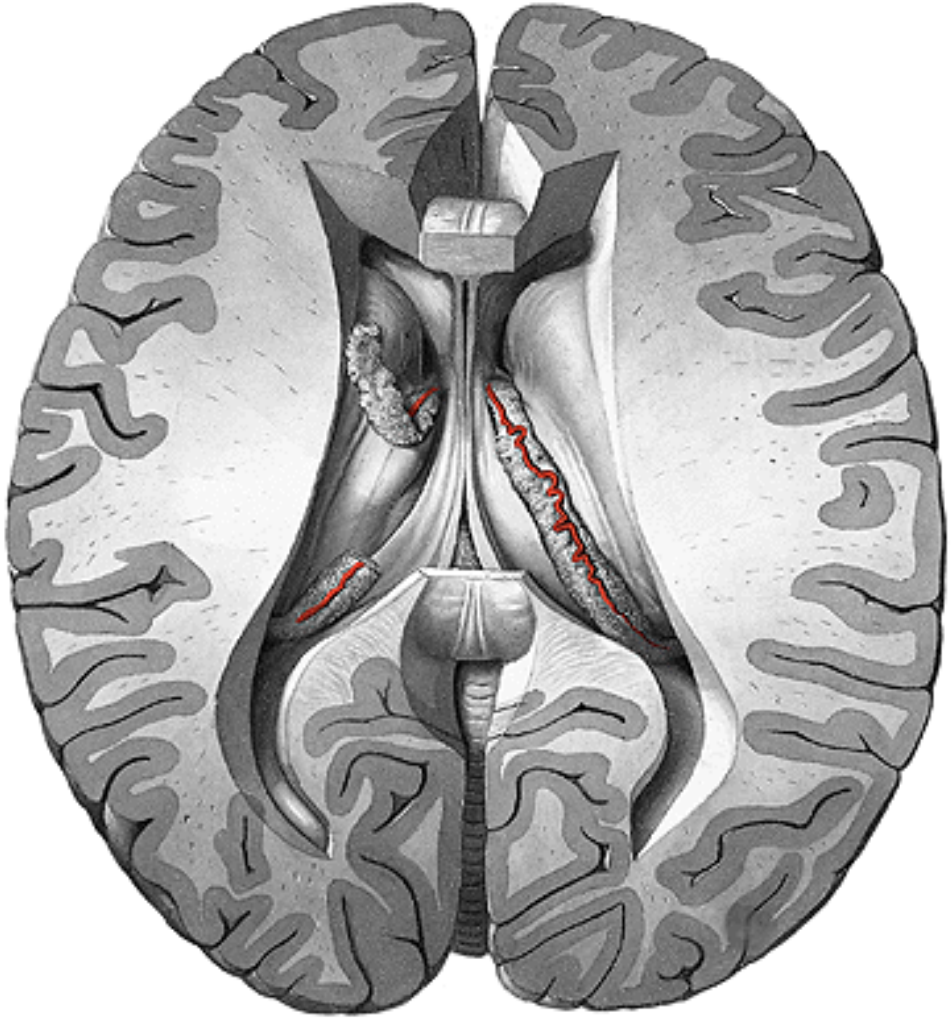

laterální průhled zleva
ventriculus lateralis dexter
cornu frontale (anterius)
pars centralis
cornu temporale (inferius)
cornu occipitale (posterius)
ventriculus lateralis sinister
aquaeductus cerebri (aquaeductus Sylvii)
ventriculus quartus
apertura lateralis ventriculi quarti sinistra (foramen Luschkae)
recessus lateralis sinister ventriculi quarti
apertura mediana ventriculi quarti (foramen Magendie)
canalis centralis ve spinální míše
foramen interventriculare sinistrum (foramen Monroi)
ventriculus tertius
recessus supraopticus
adhesio interthalamica
recessus infundibuli
recessus pinealis
recessus suprapinealis

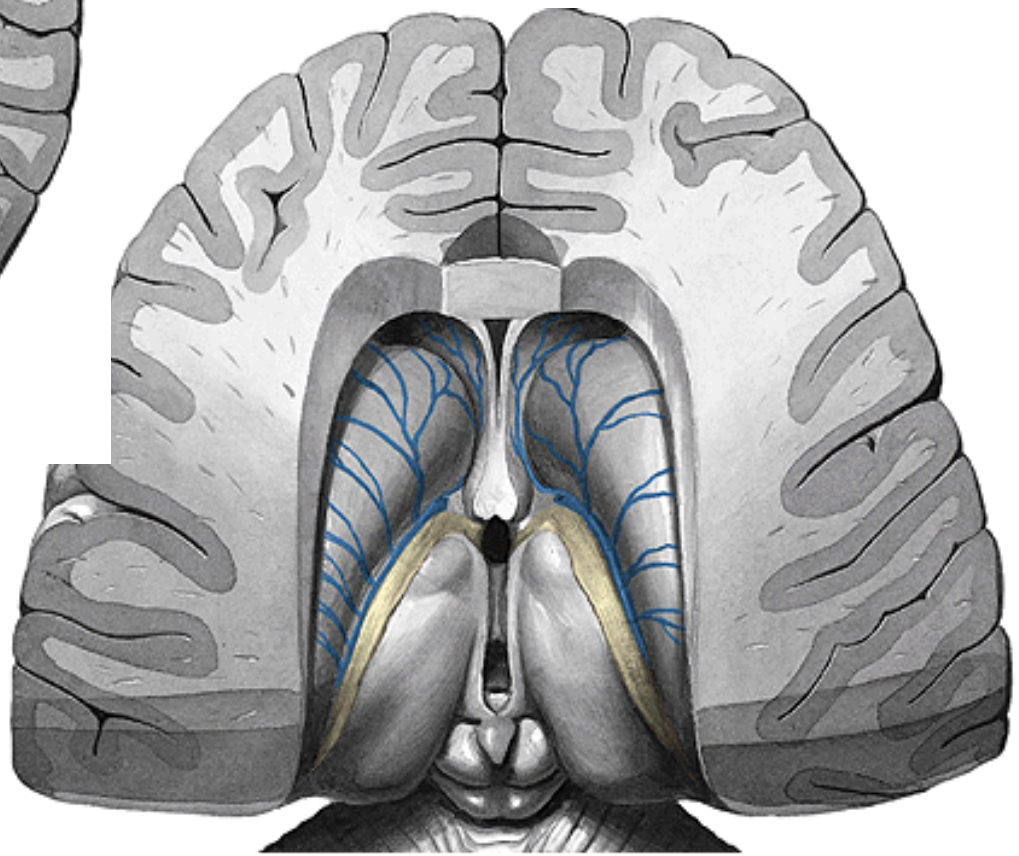

Gyrus frontalis superior
Fissura longitudinalis cerebralis
Sulcus cinguli
Gyrus cinguli
Gyrus frontalis medius
Sulcus corporis callosi
Nucleus caudatus, Caput
Gyrus frontalis inferior
Putamen
Sulcus circularis insulae
Sulcus lateralis cerebralis
Claustrum
Gyri insulae
Gyrus temporalis superior
Cisterna fossae lateralis cerebri
Gyrus paraterminalis
Gyrus temporalis inferior
Cisterna pericallosa, (Cisterna laminae terminalis)
Margo superior [superomedialis]
A. callosomarginalis; Cisterna pericallosa
Corpus callosum, Truncus
Radiatio corporis callosi
Septum pellucidum
Ventriculus lateralis, Cornu frontale
Capsula interna, Crus anterius
Capsula externa
Corpus callosum, Rostrum
Capsula extrema
V. media superficialis cerebri
A. cerebri media, Pars insularis
A. communicans anterior
Margo inferior [inferolateralis]
A. cerebri anterior, Pars precommunicalis
Gyrus rectus
Tractus olfactorius
Margo medialis [inferomedialis]

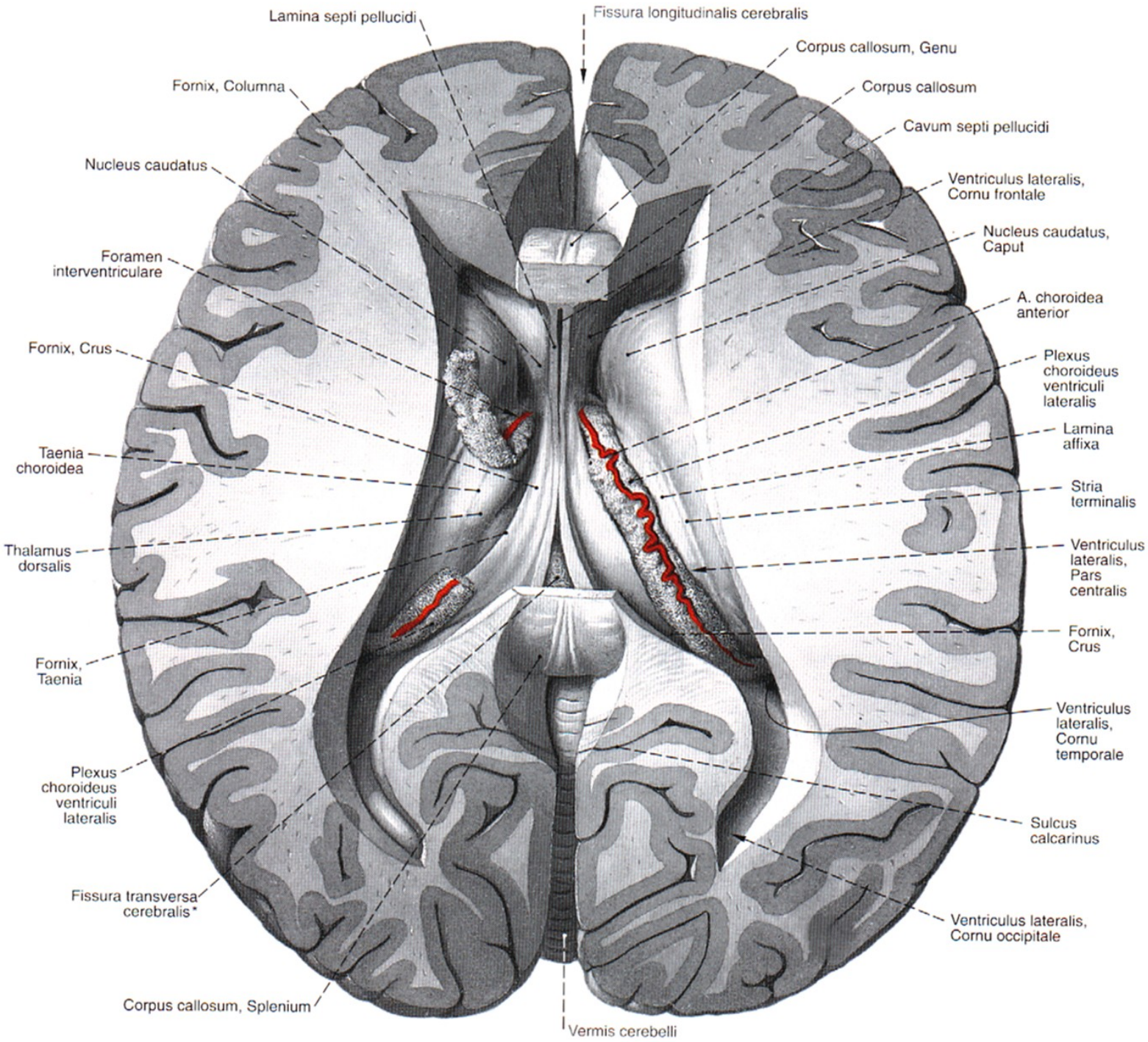


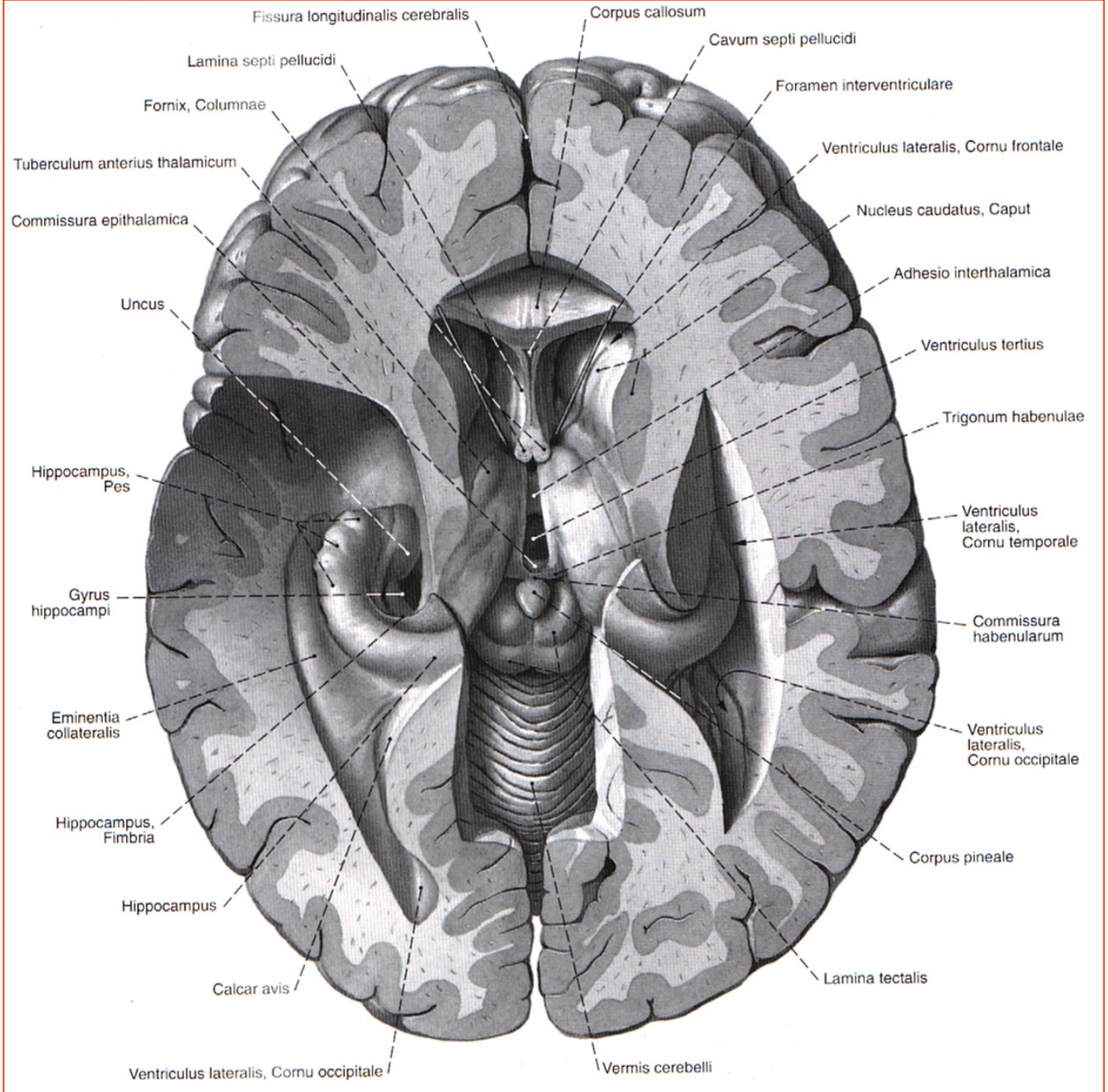


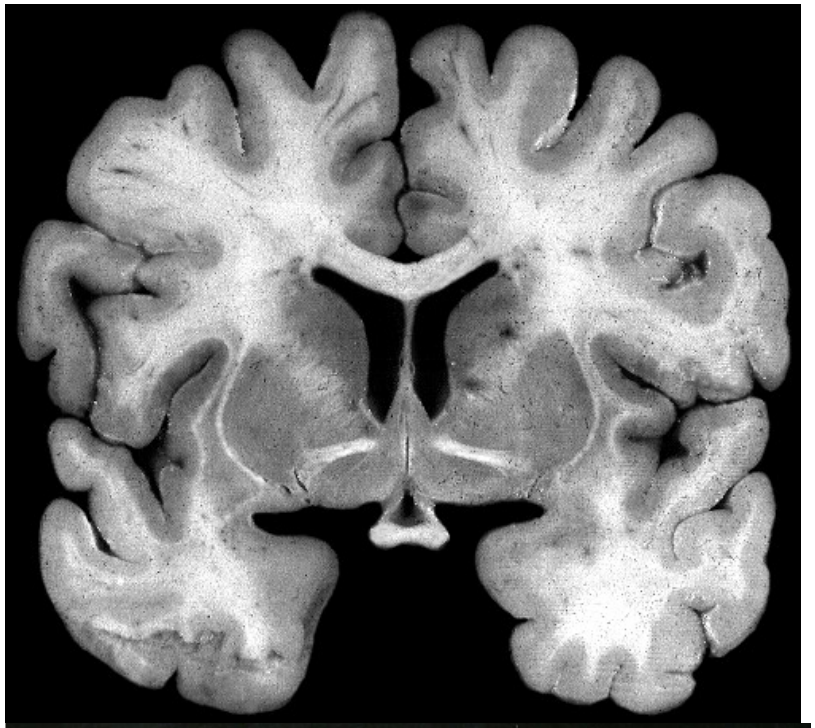


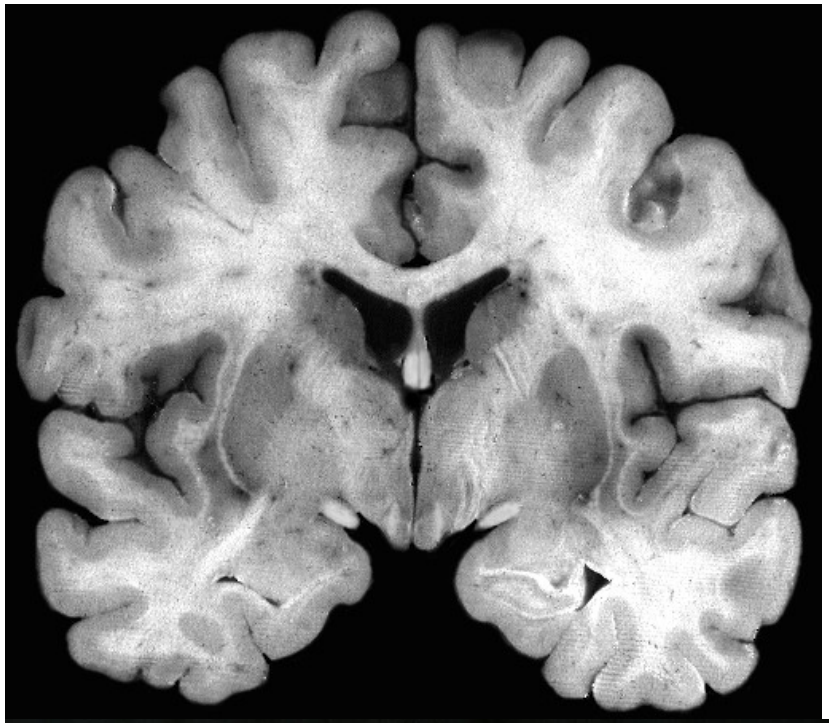


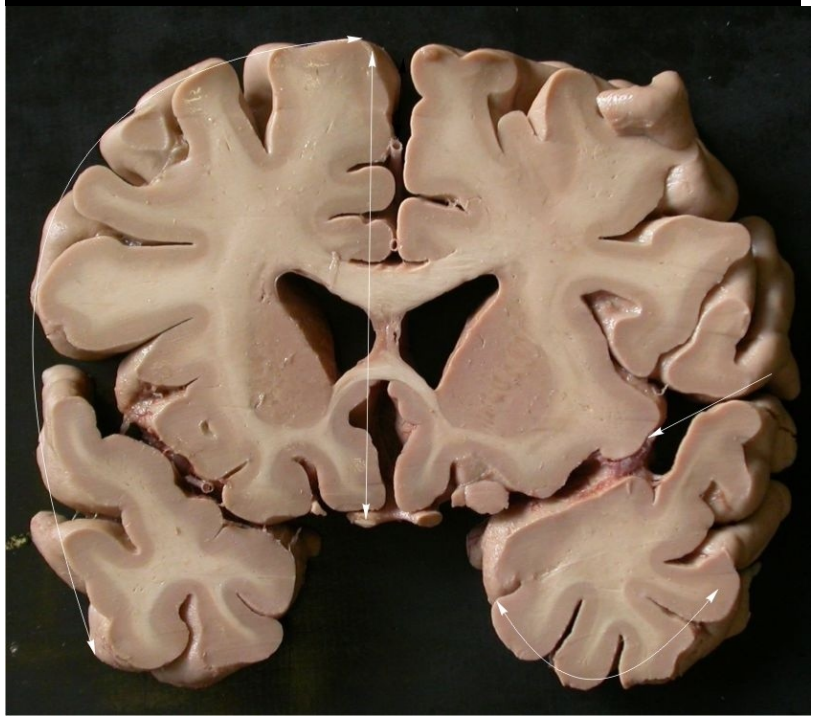



Lamina septi pellucidi
Fissura longitudinalis cerebralis
Corpus callosum, Genu
Fornix, Columna
Corpus callosum
Cavum septi pellucidi
Nucleus caudatus
Ventriculus lateralis, Cornu frontale
Nucleus caudatus, Caput
Foramen interventriculare
A. choroidea anterior
Fornix, Crus
Plexus choroideus ventriculi lateralis
Lamina affixa
Taenia choroidea
Stria terminalis
Thalamus dorsalis
Ventriculus lateralis, Pars centralis
Fornix, Crus
Fornix, Taenia
Ventriculus lateralis, Cornu temporale
Plexus choroideus ventriculi lateralis
Sulcus calcarinus
Fissura transversa cerebralis
Ventriculus lateralis, Cornu occipitale
Corpus callosum, Splenium
Vermis cerebelli

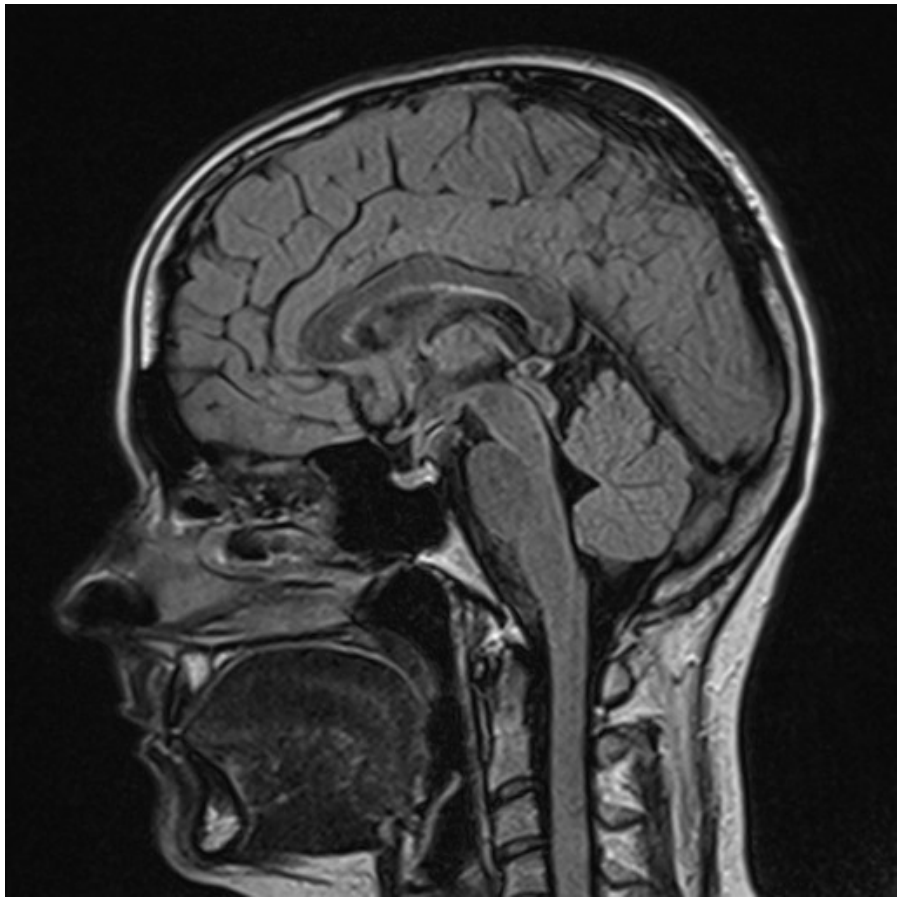

Fissura longitudinalis cerebralis
Corpus callosum
Cavum septi pellucidi
Lamina septi pellucidi
Foramen interventriculare
Fornix, Columnae
Ventriculus lateralis, Cornu frontale
Tuberculum anterius thalamicum
Nucleus caudatus, Caput
Commissura epithalamica
Adhesio interthalamica
Uncus
Ventriculus tertius
Trigonum habenulae
Hippocampus, Pes
Ventriculus lateralis, Cornu temporale
Gyrus hippocampi
Commissura habenularum
Eminentia collateralis
Ventriculus lateralis, Cornu occipitale
Hippocampus, Fimbria
Corpus pineale
Hippocampus
Lamina tectalis
Calcar avis
Ventriculus lateralis, Cornu occipitale
Vermis cerebelli

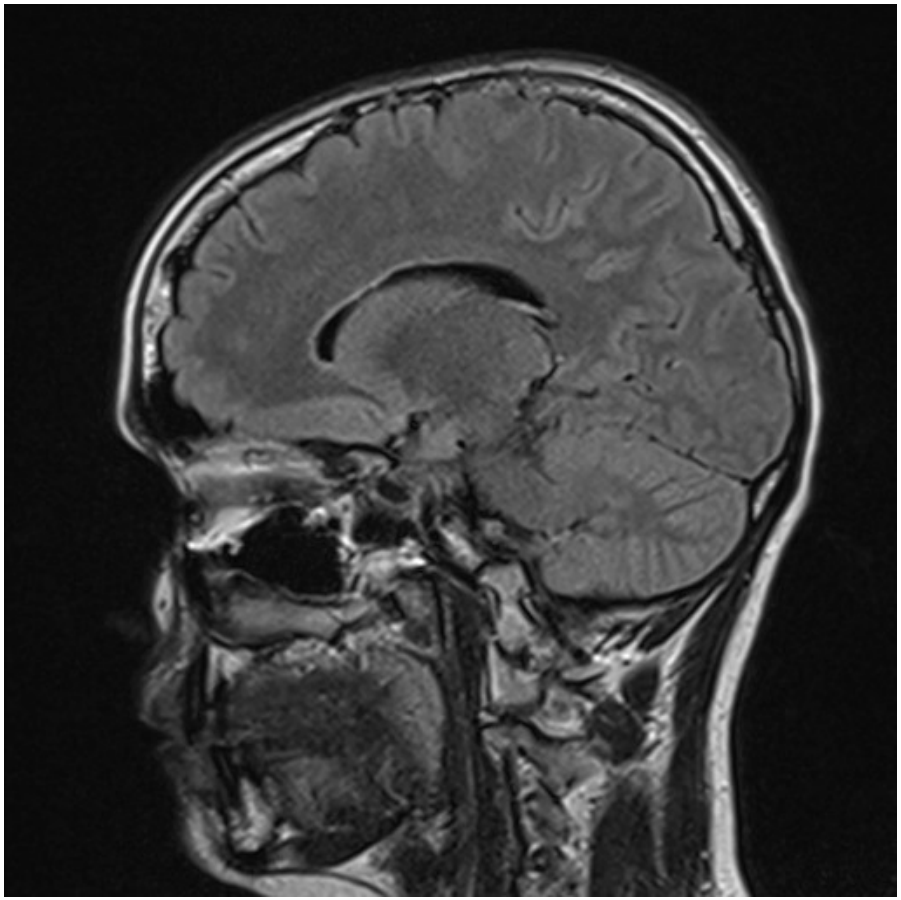




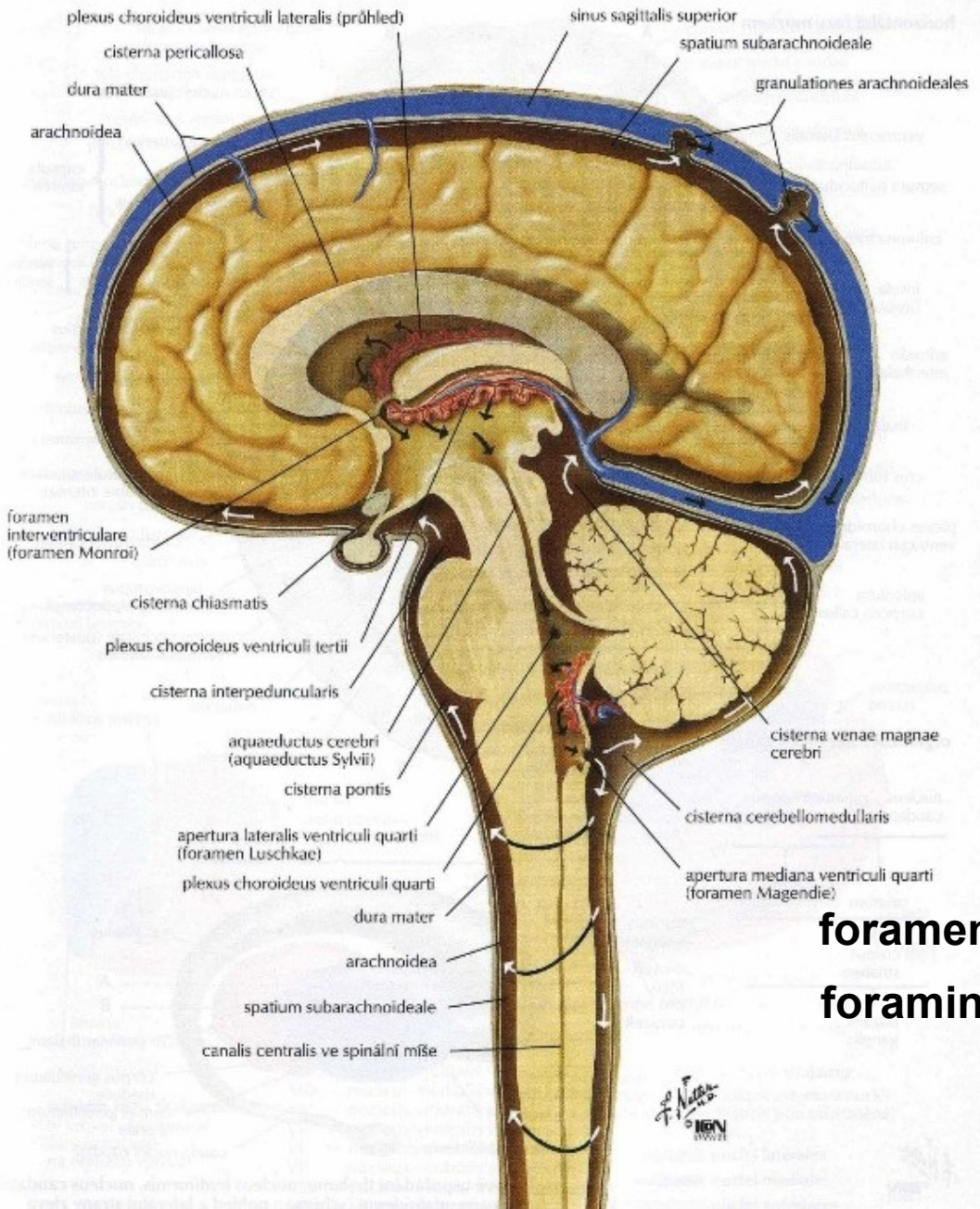


CT vyšetření



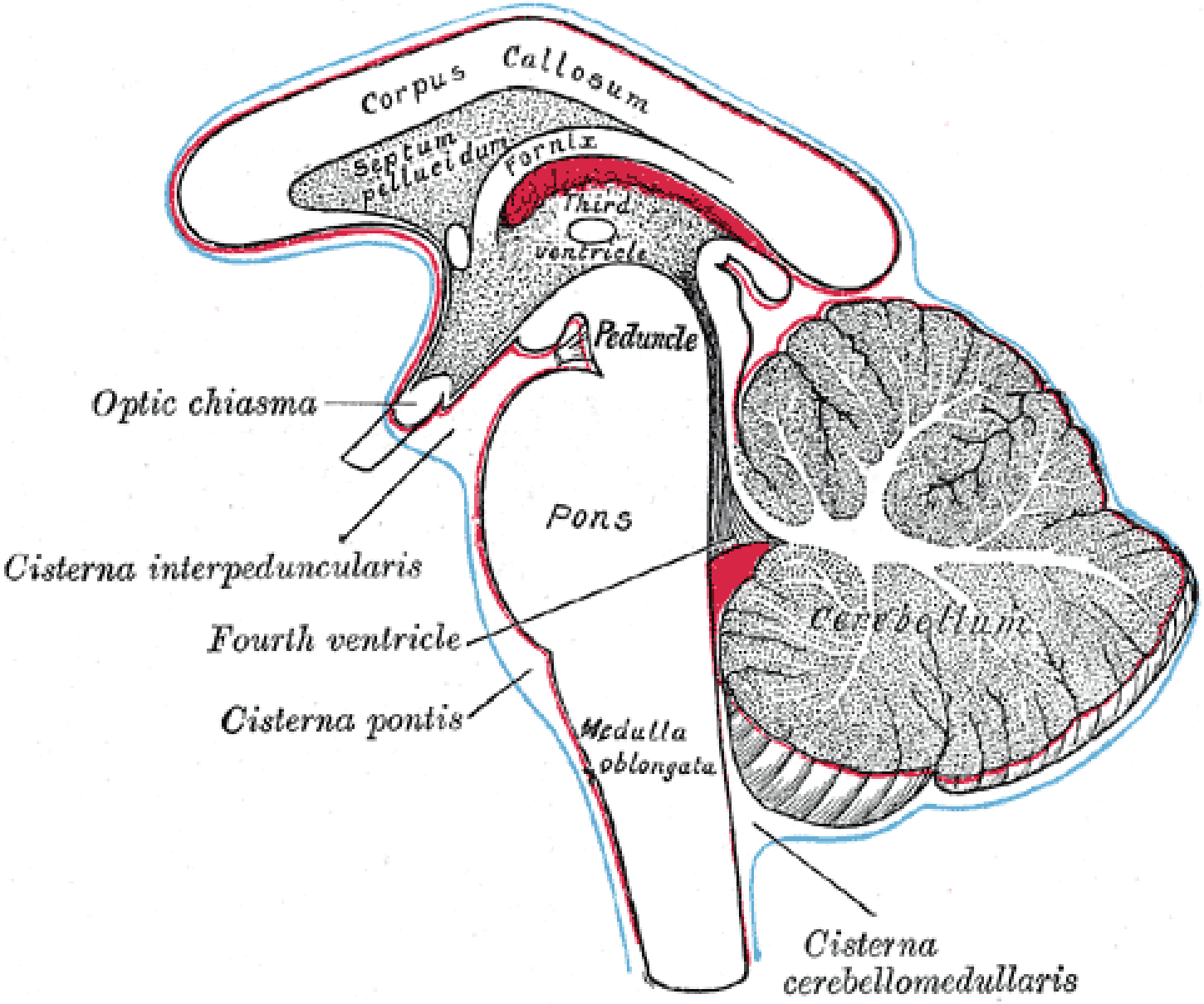


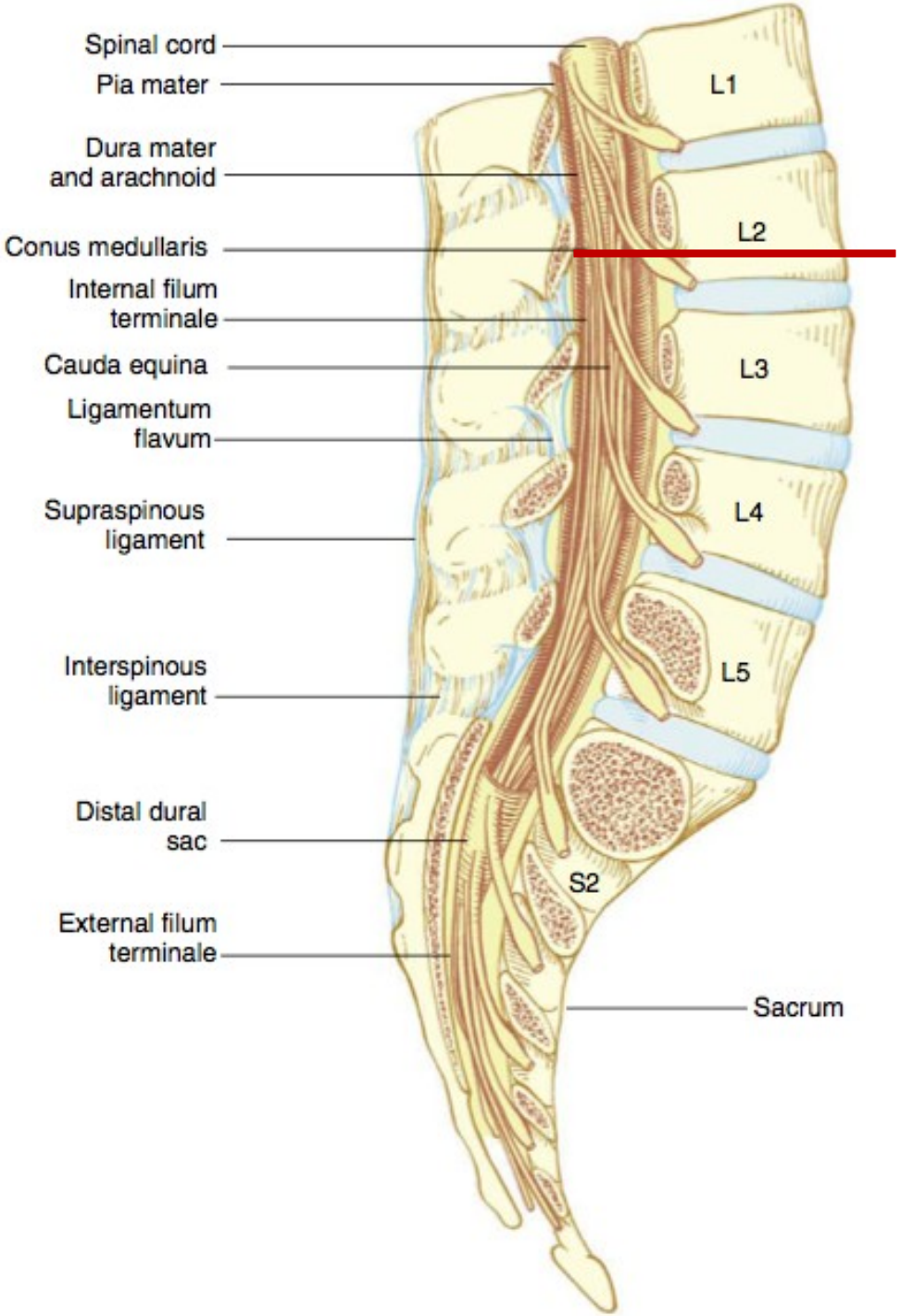
Cirkulace mozkomíšního moku

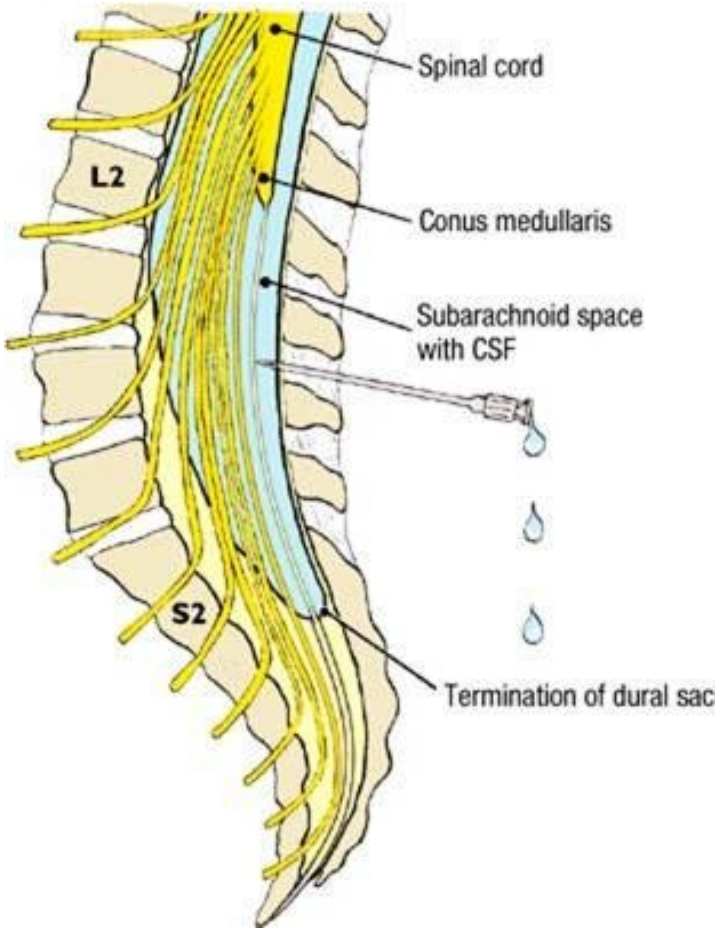


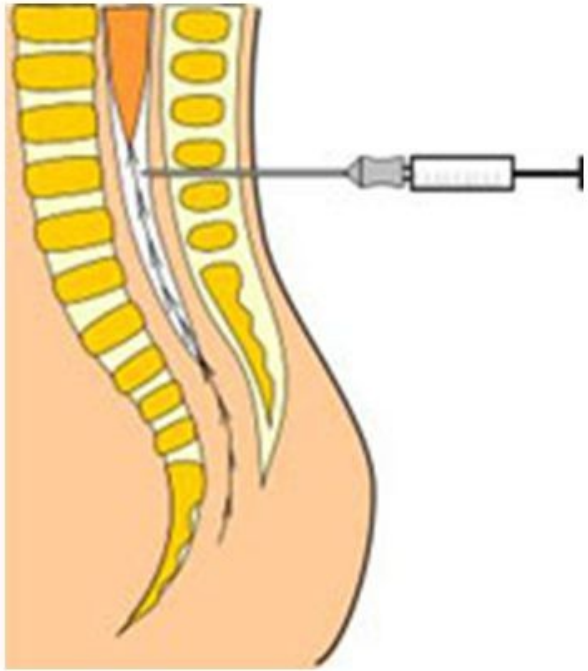
foramen Magendie

foramina Luschkae


Corpus Callosum
Septum pellucidum
Fornix
Third ventricle
Peduncle
Optic chiasma
Pons
Cisterna interpeduncularis
Cerebellum
Fourth ventricle
Cisterna pontis
Medulla oblongata
Cisterna cerebellomedullaris

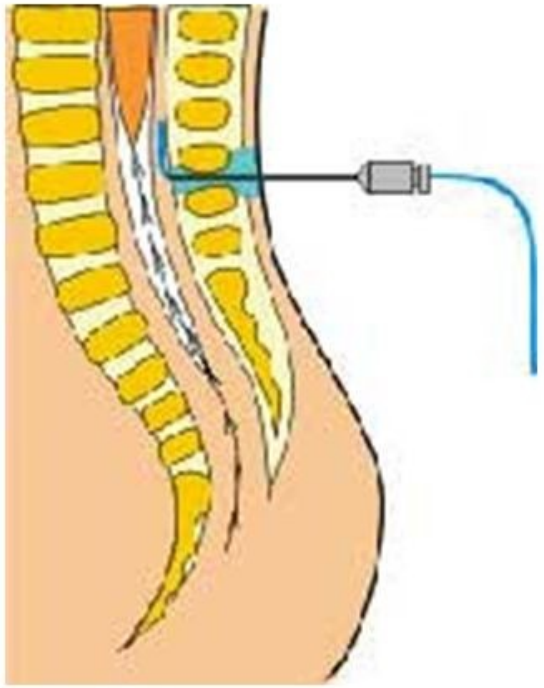

Spinal cord
Pia mater
Dura mater and arachnoid
Conus medullaris
Internal filum terminale
Cauda equina
Ligamentum flavum
Supraspinous ligament
Interspinous ligament
Distal dural sac
External filum terminale
L1
L2
L3
L4
L5
S2
Sacrum


Spinal cord
L2
Conus medullaris
Subarachnoid space with CSF
S2
Termination of dural sac



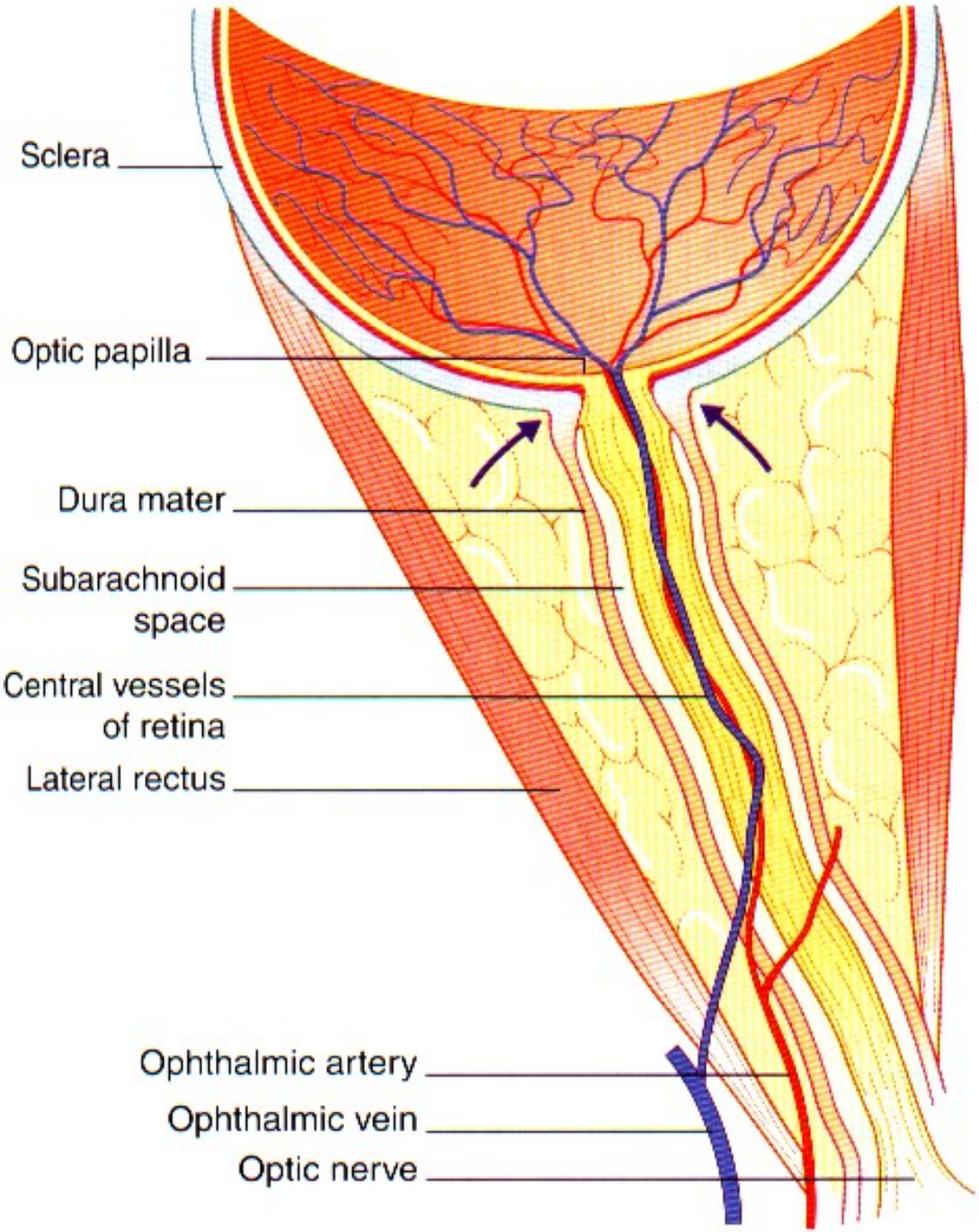
• subarachnoidální anestézie

= „spinál“



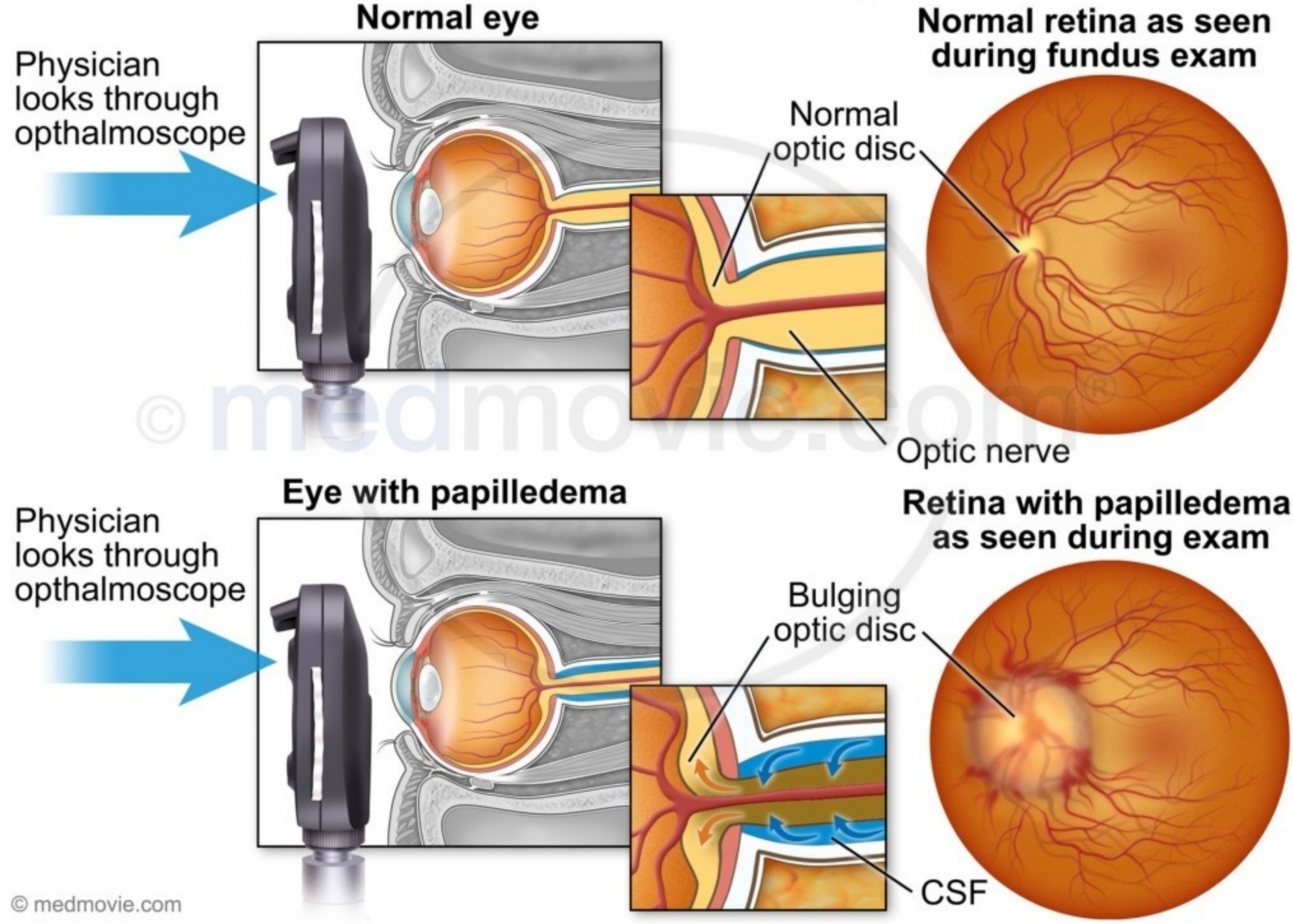
• epidurální anestézie

= „epidurál“

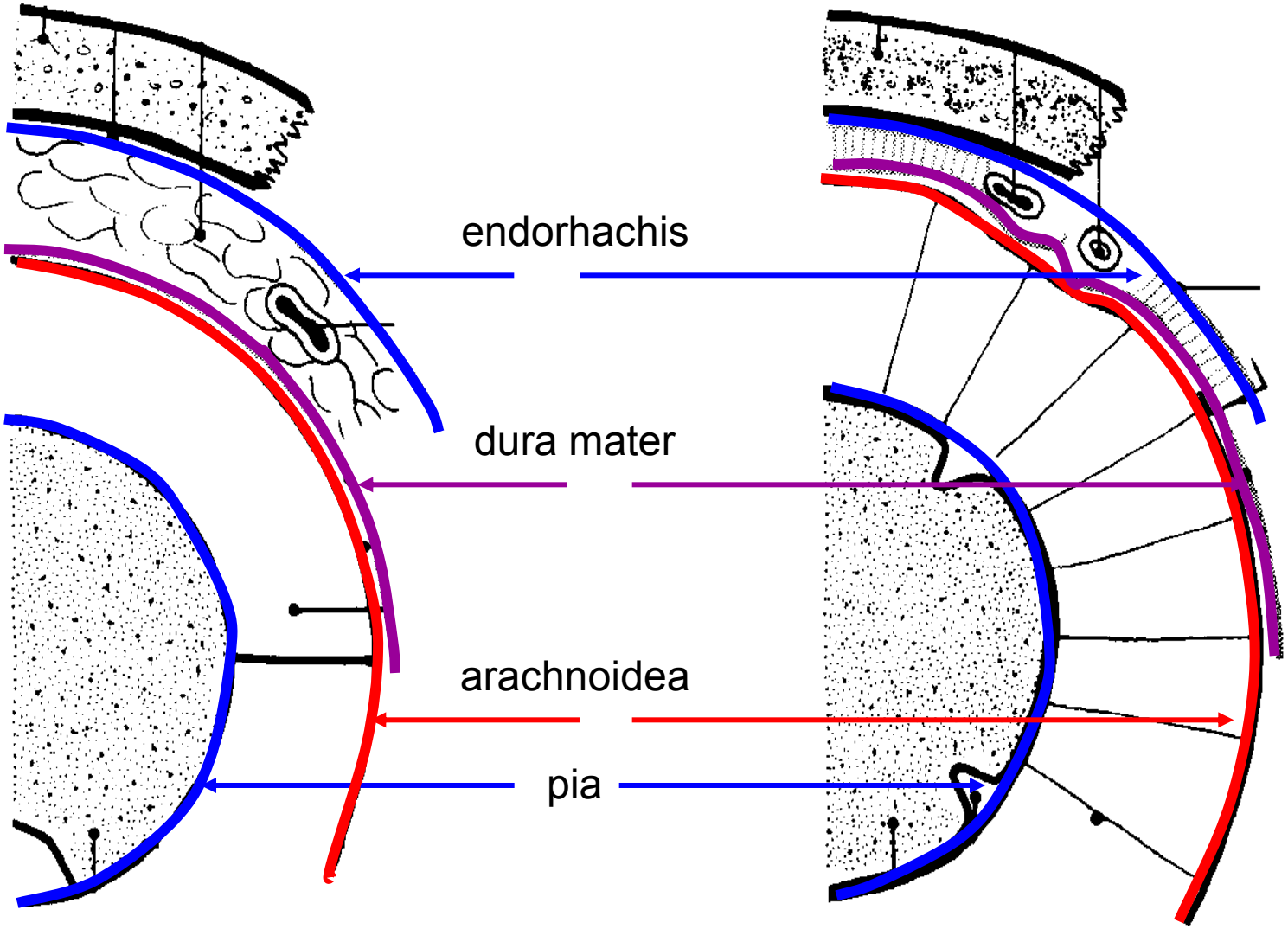


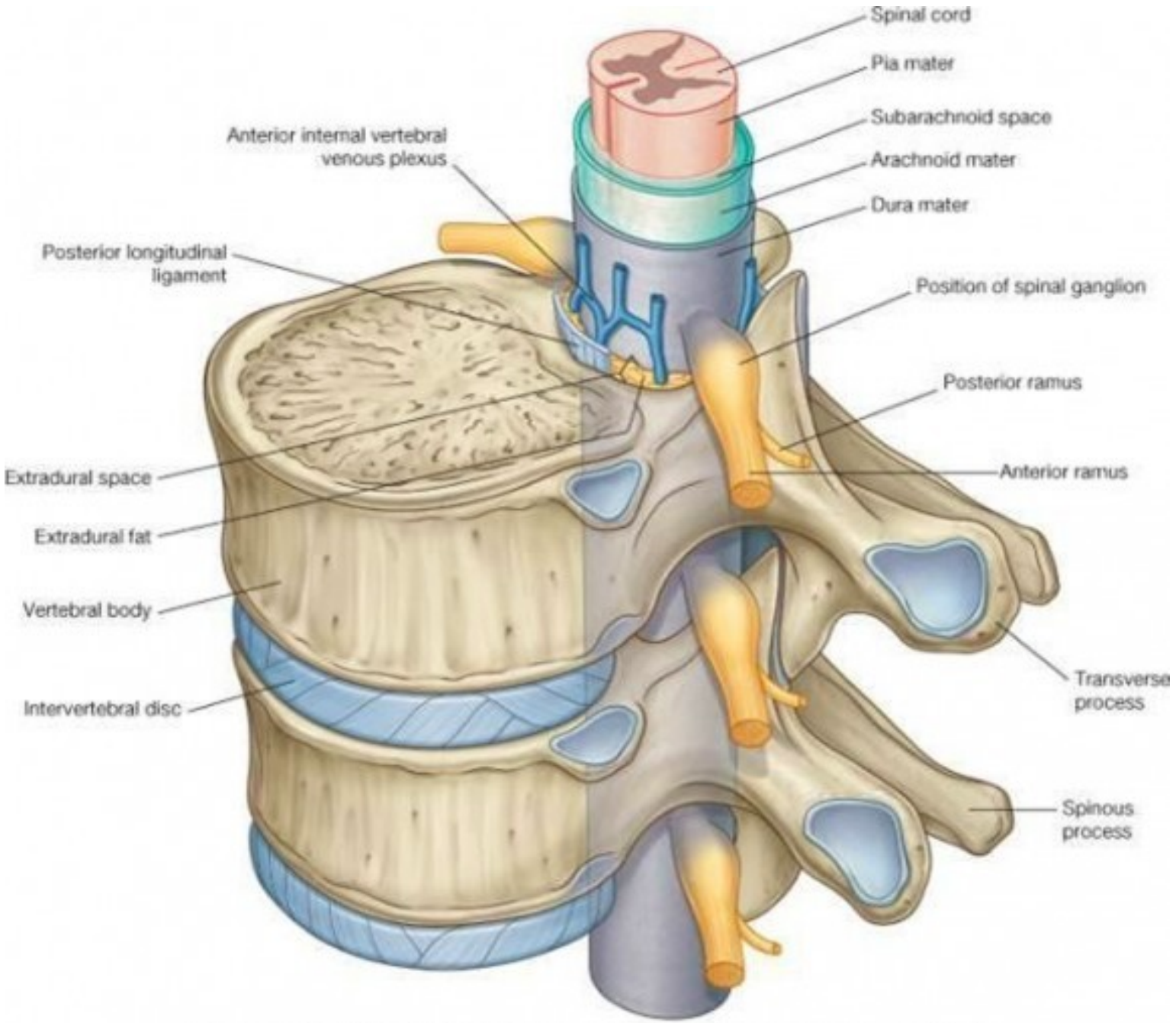
zvýšený tlak CST podél n. opticus – komprese v. centralis retinae – papilledema, papilární edém

Fundus Exam - Normal vs. Papilledema

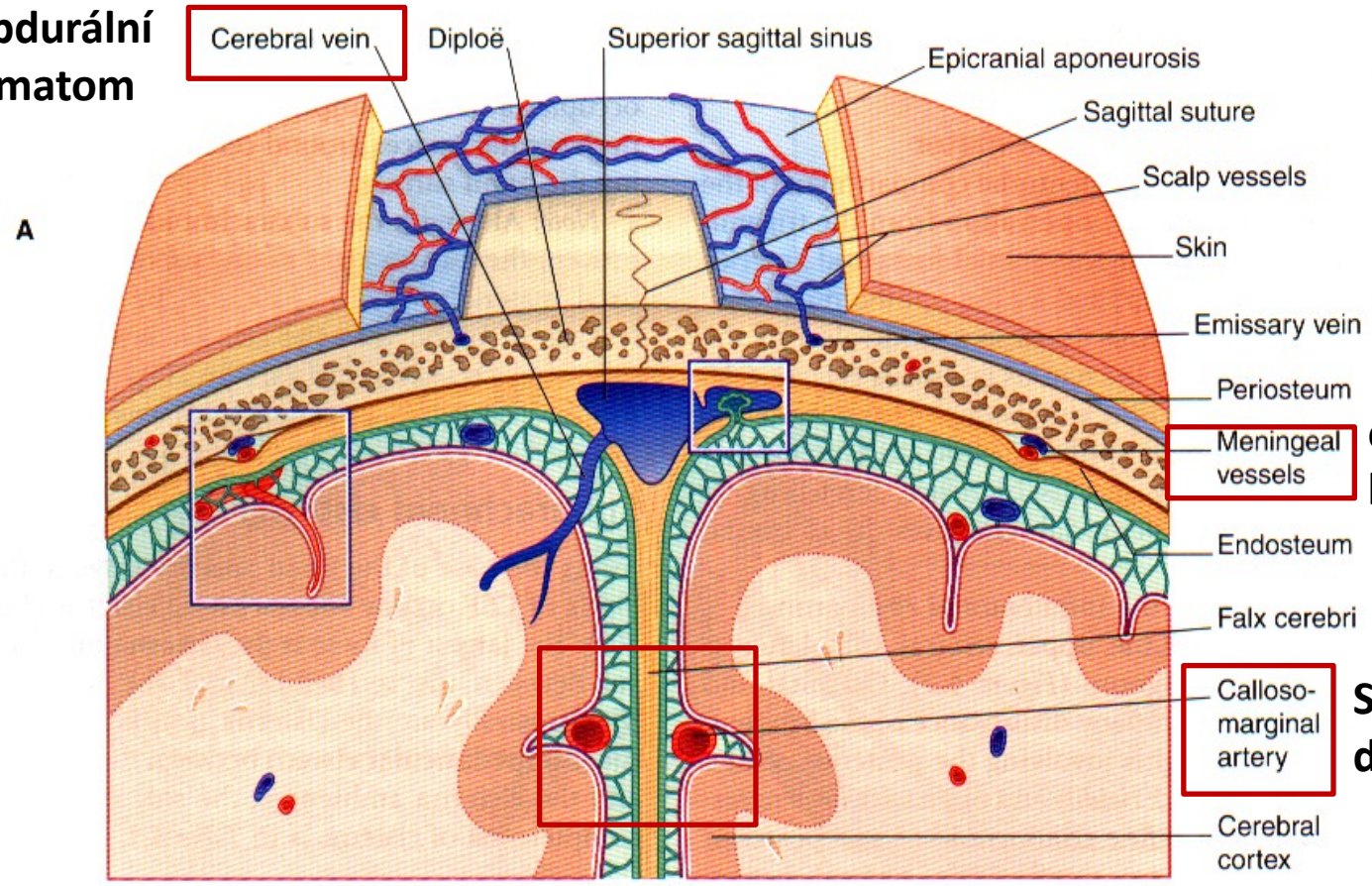


Obaly CNS



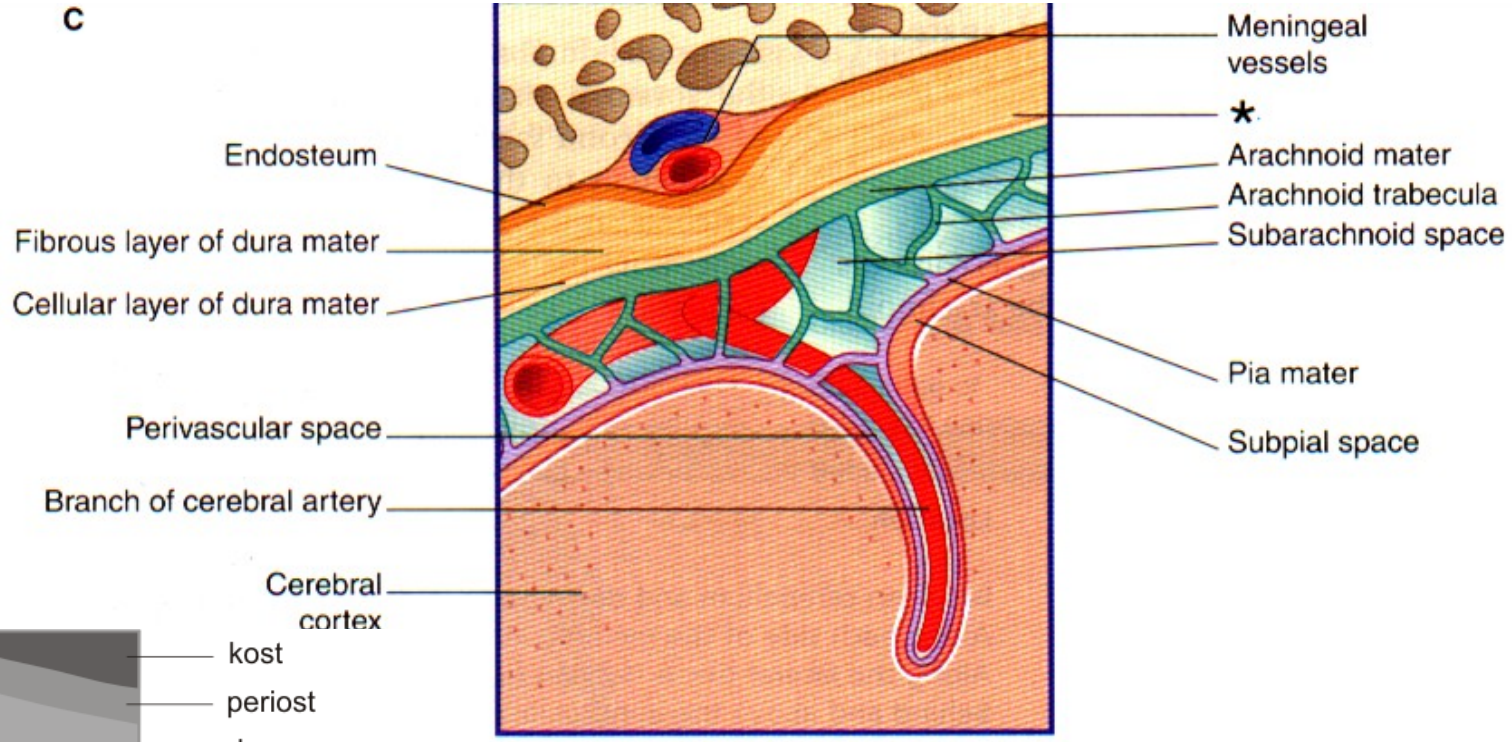


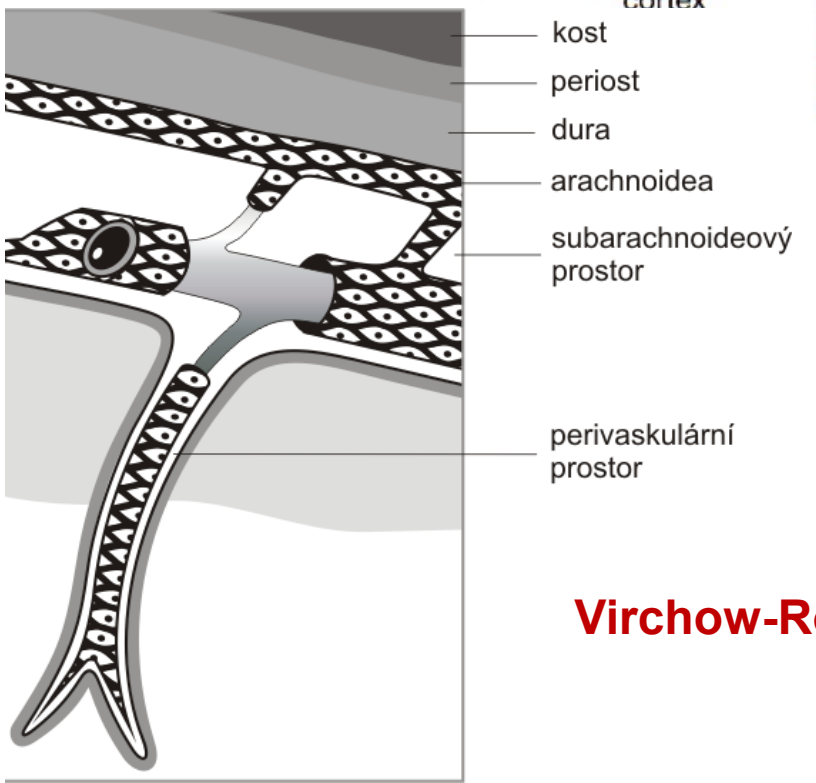
subdurální hematom



epidurální hematom

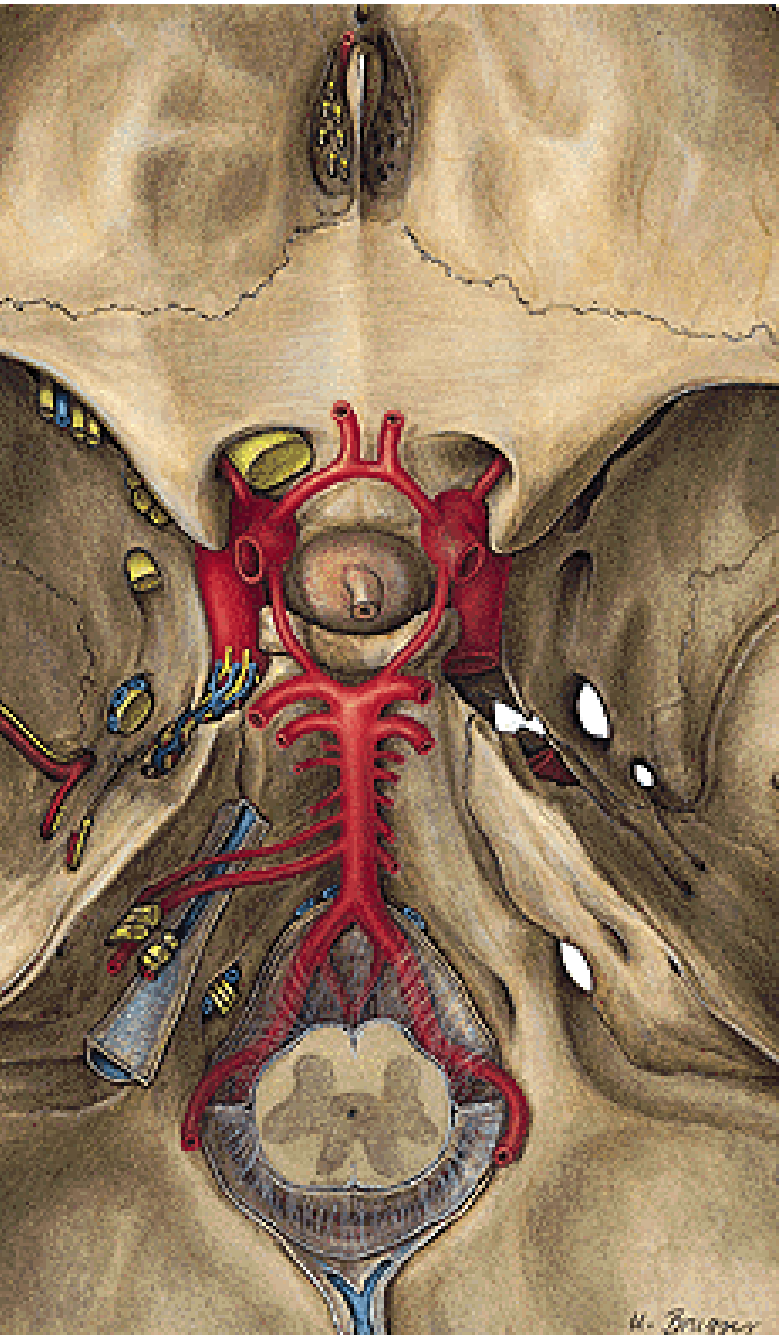
Subarachnoi-deální krvácení

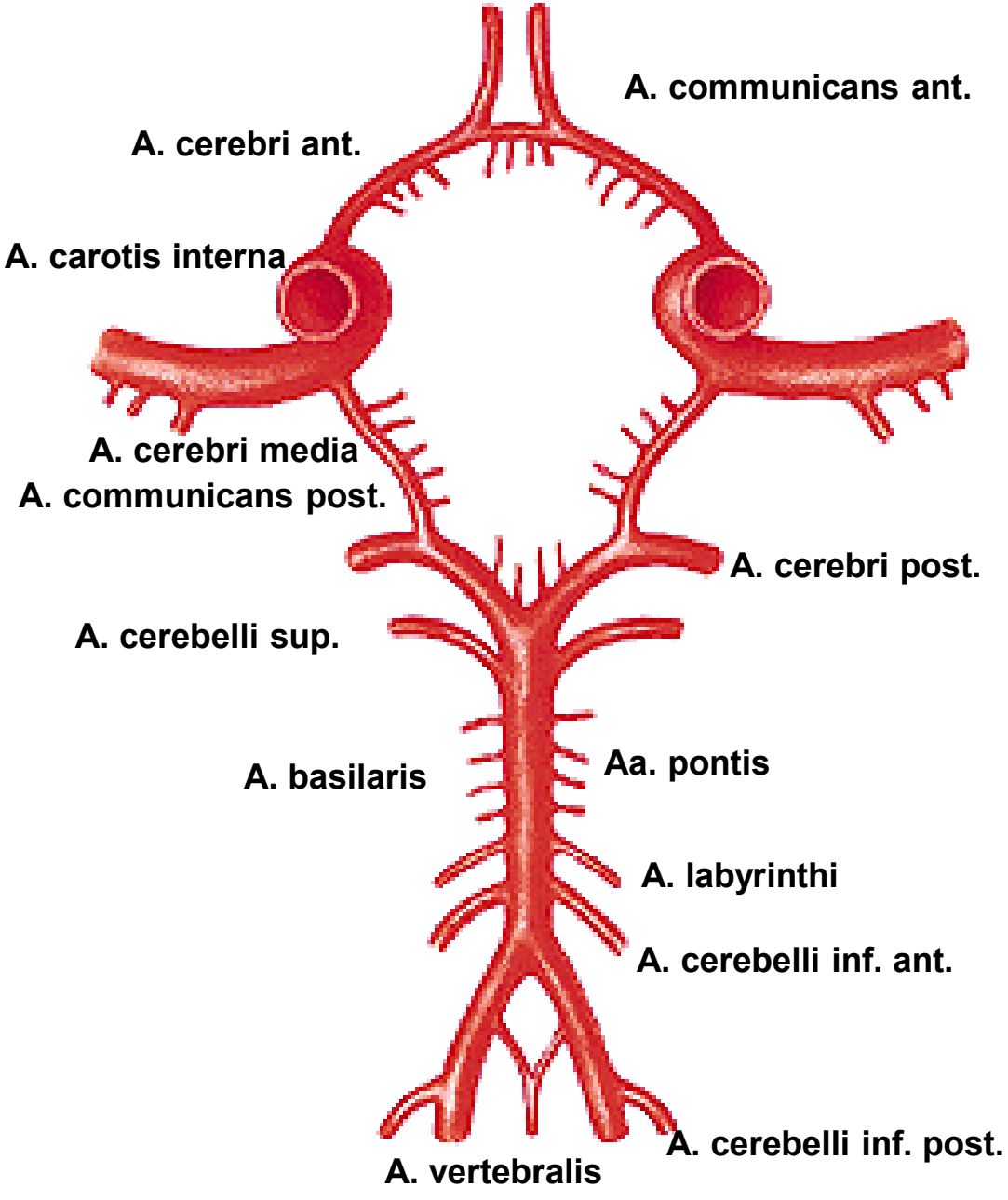


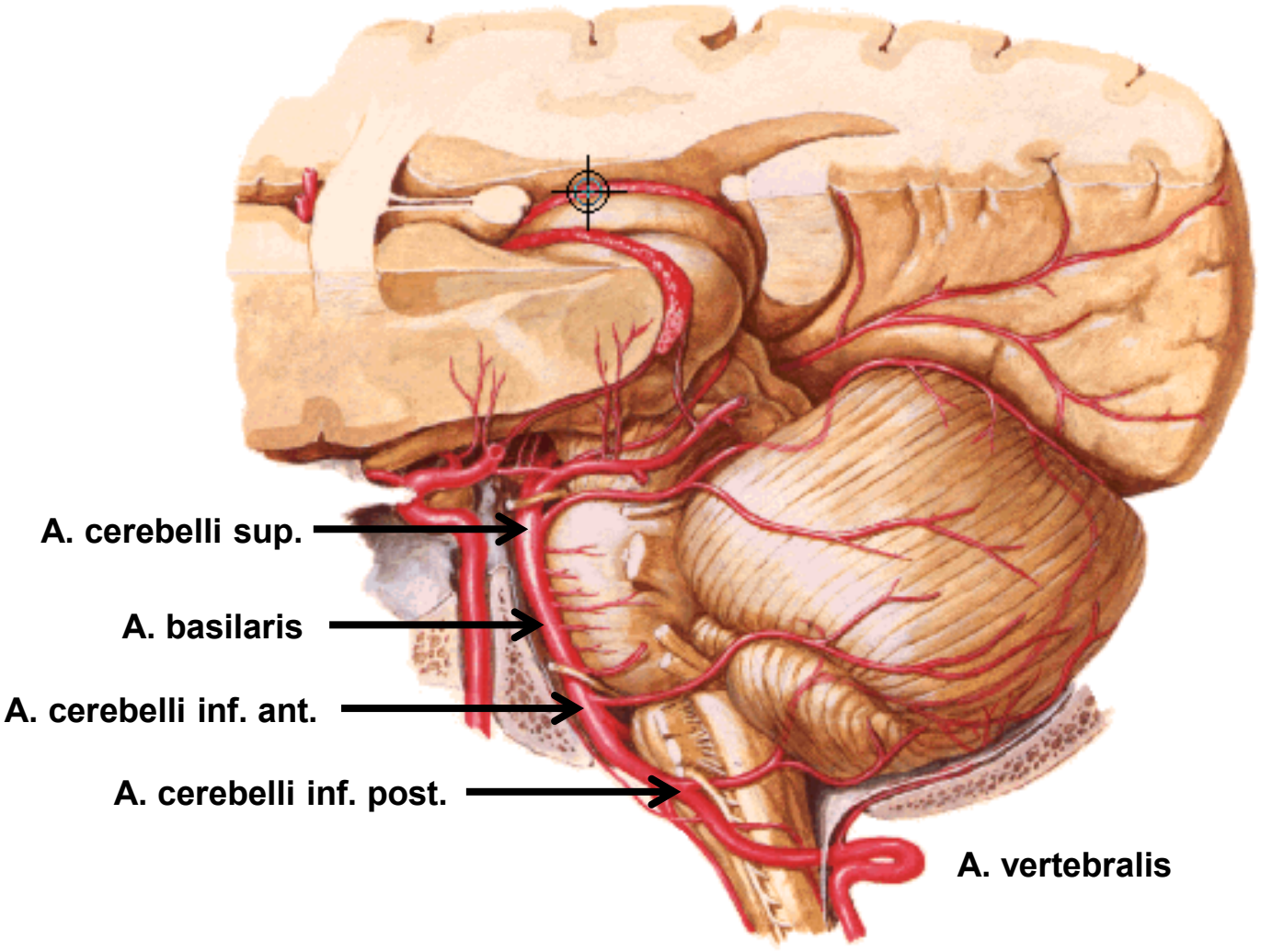


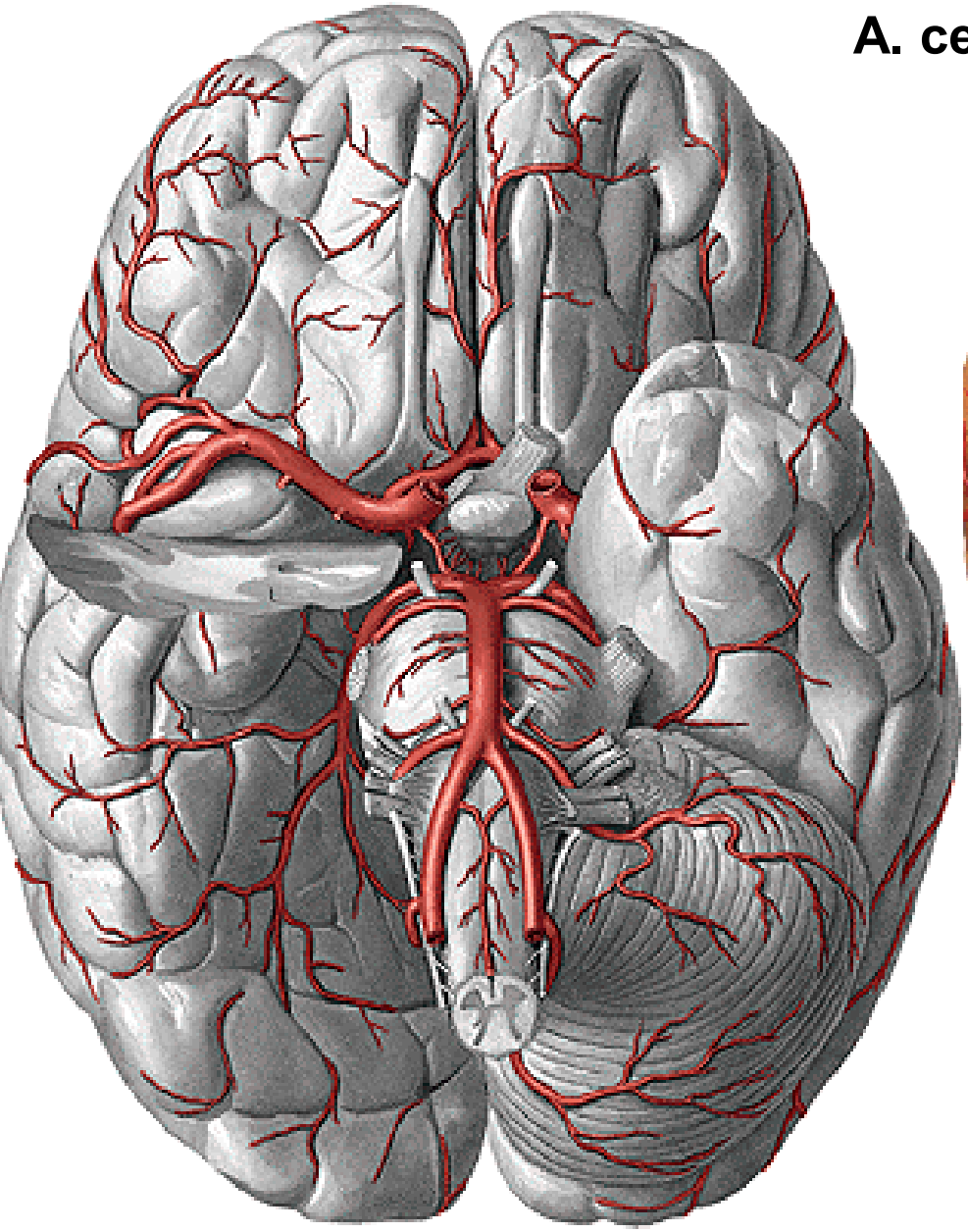
Virchow-Robinův perivaskulární prostor

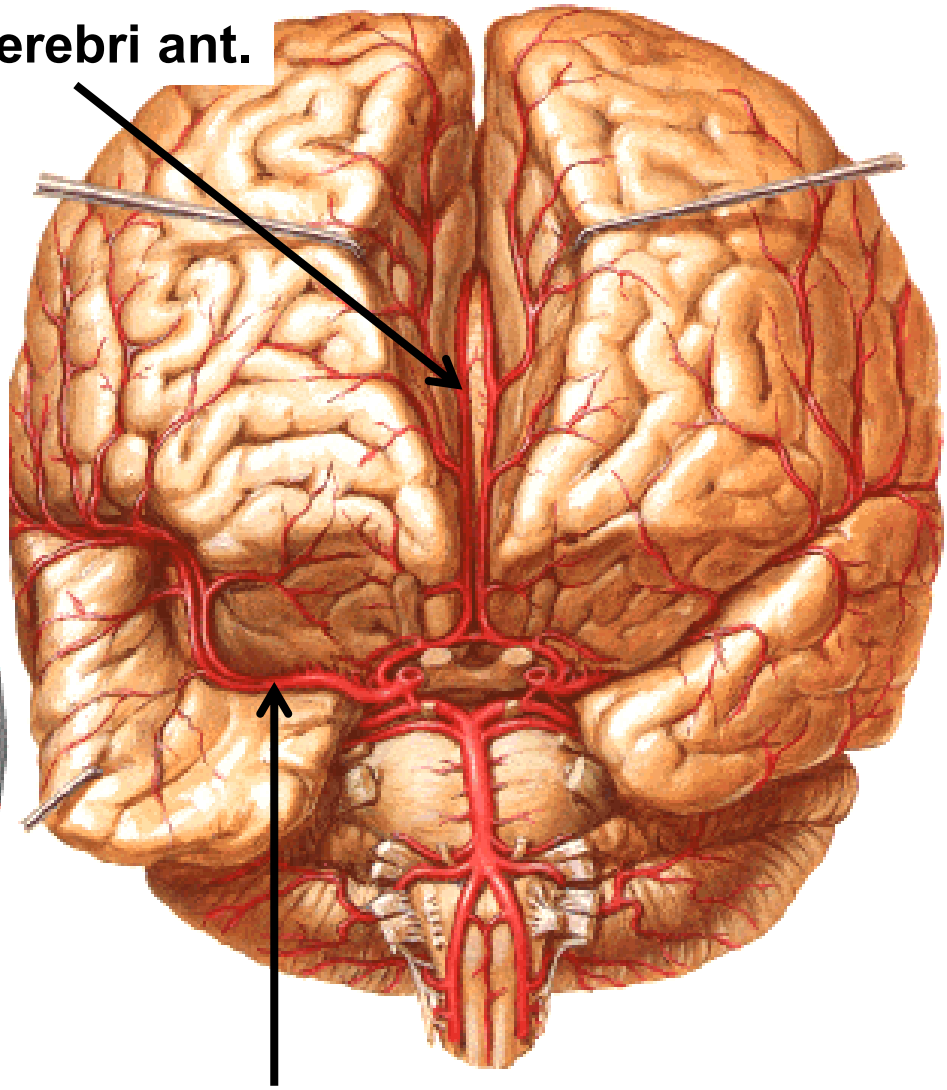
Circulus arteriosus cerebri (Willis)

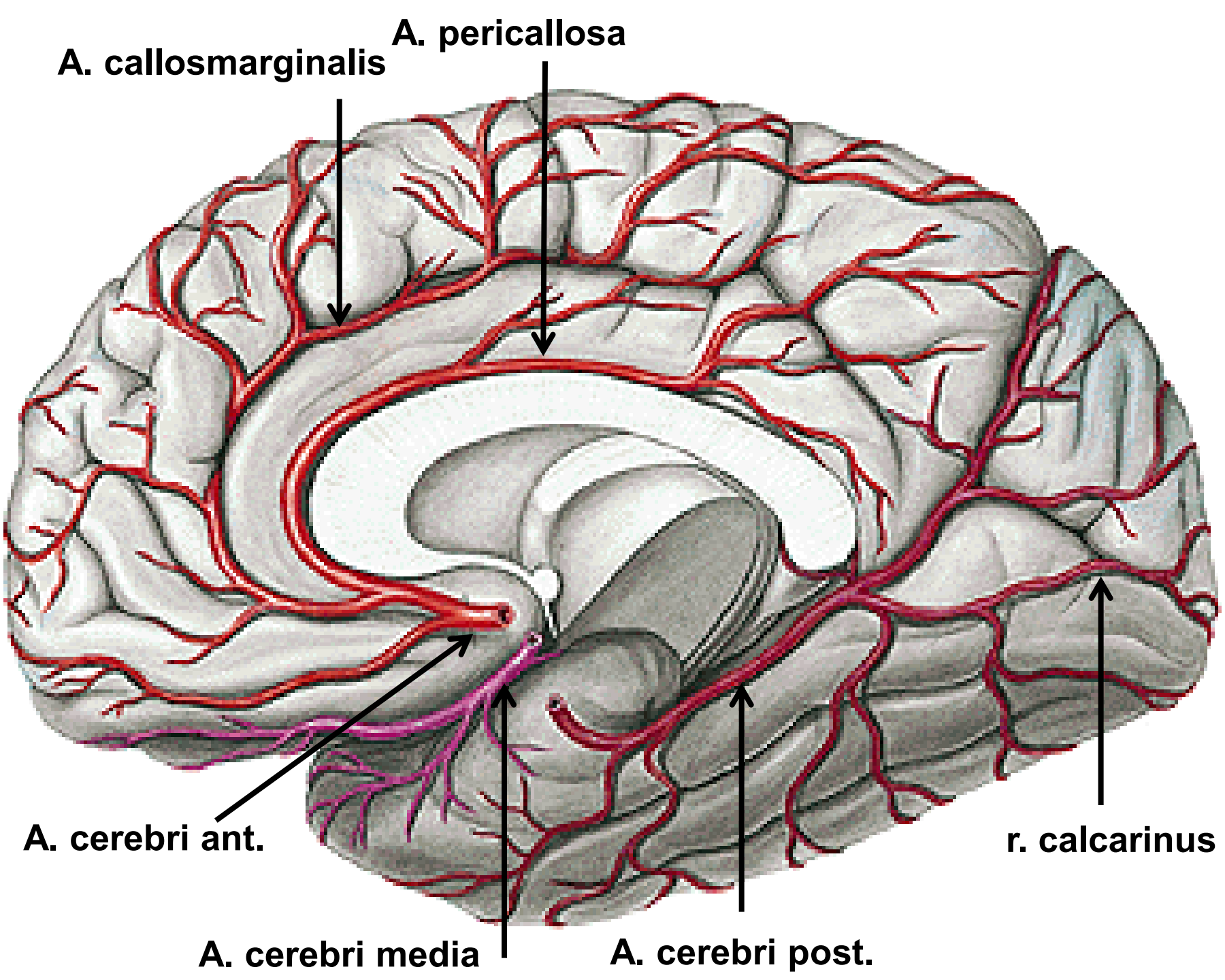


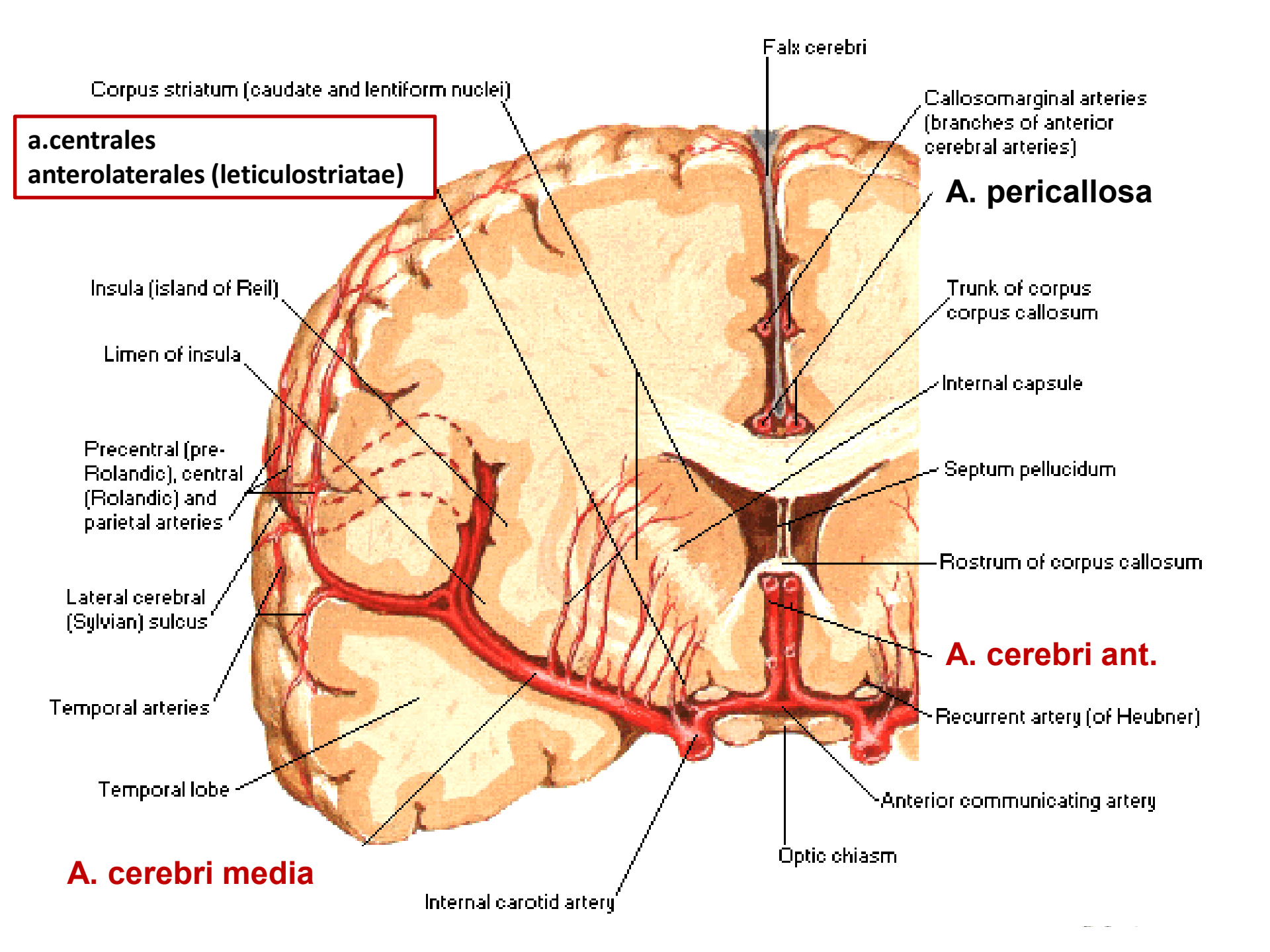



A. cerebelli sup.
A. basilaris
A. cerebelli inf. ant.
A. cerebelli inf. post.
A. vertebralis

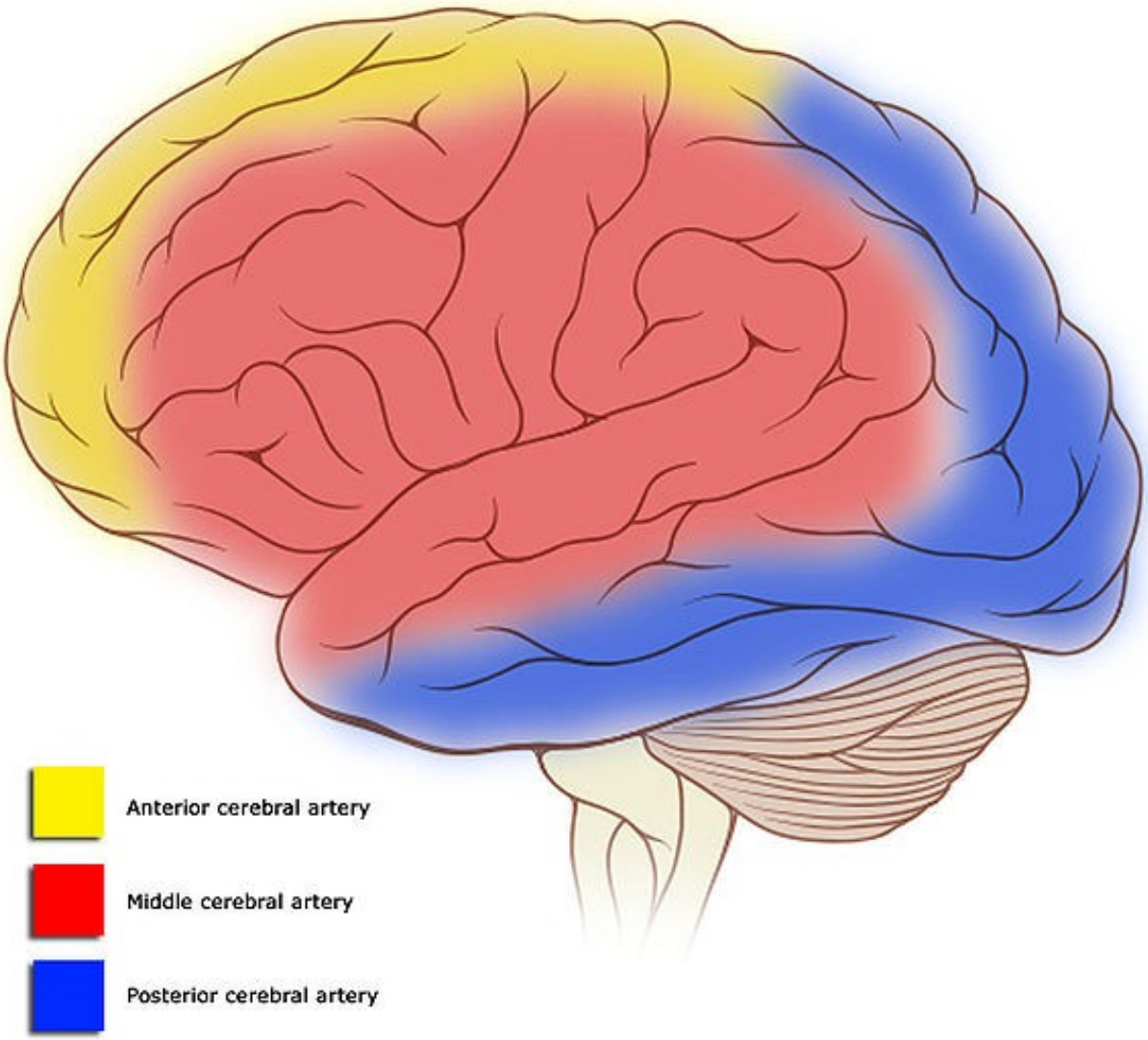



A. cerebri ant.
A. cerebri media

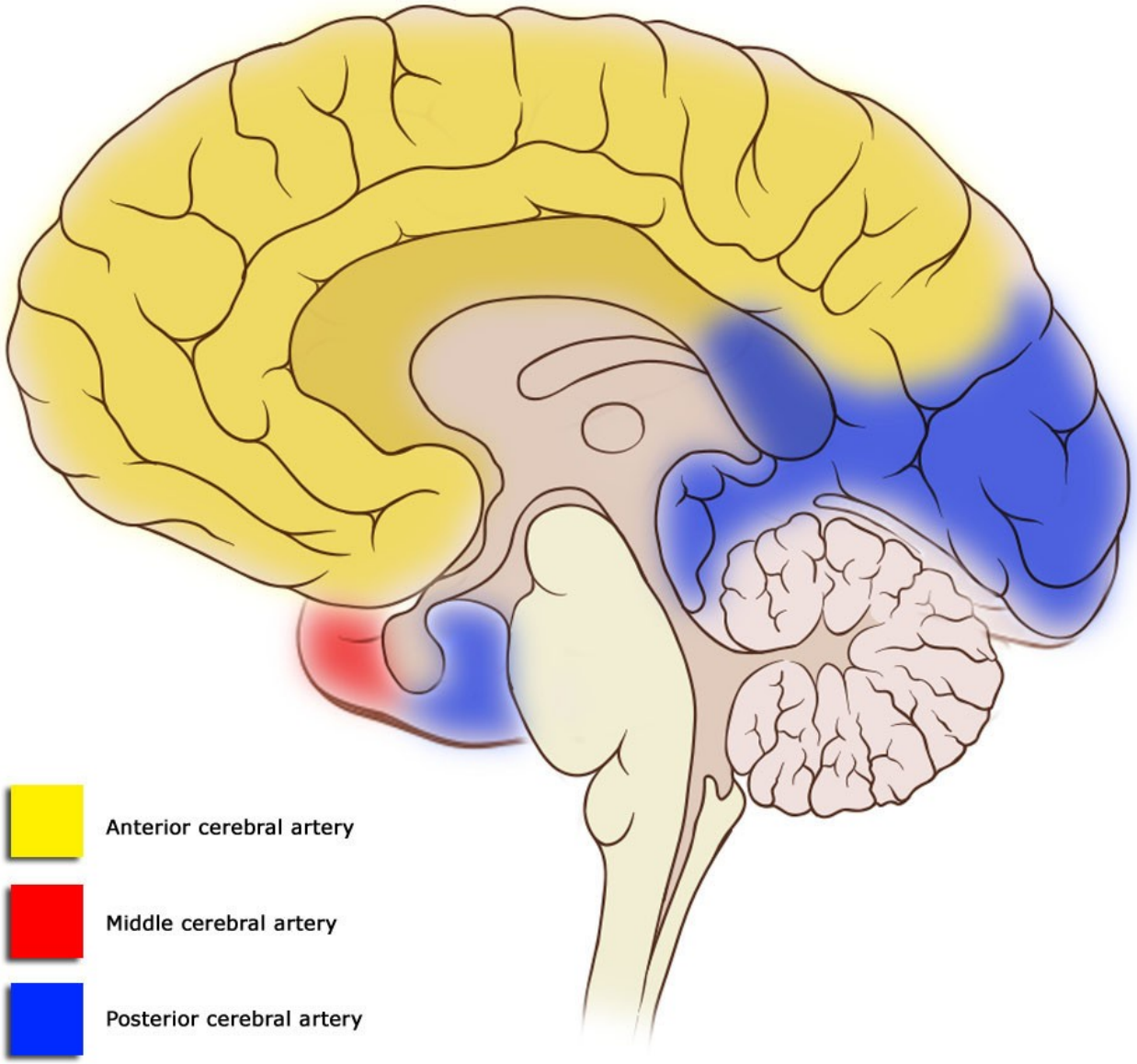

A. callosmarginalis
A. pericallosa
A. cerebri ant.
A. cerebri media
A. cerebri post.
r. calcarinus

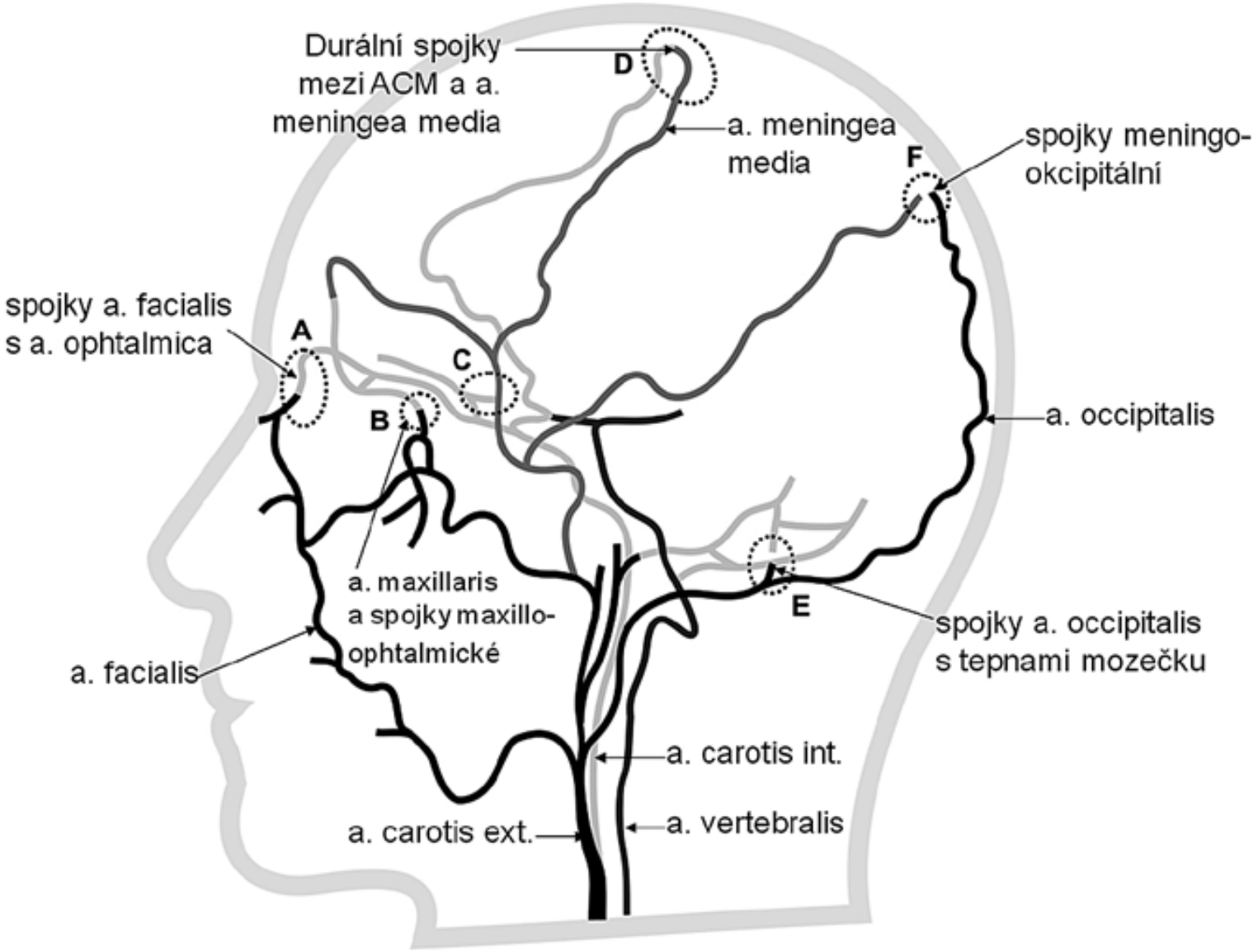

a.centrales anterolaterales (leticulostriatae)
Falx cerebri
Corpus striatum (caudate and lentiform nuclei)
Callosomarginal arteries (branches of anterior cerebral arteries)
A. pericallosa
Insula (island of Reil)
Trunk of corpus corpus callosum
Limen of insula
Internal capsule
Precentral (pre-Rolandic), central (Rolandic) and parietal arteries
Septum pellucidum
Rostrum of corpus callosum
Lateral cerebral (Sylvian) sulcus
A. cerebri ant.
Temporal arteries
Recurrent artery (of Heubner)
Temporal lobe
Anterior communicating artery
Optic chiasm
A. cerebri media
Internal carotid artery

Cortical vascular territories



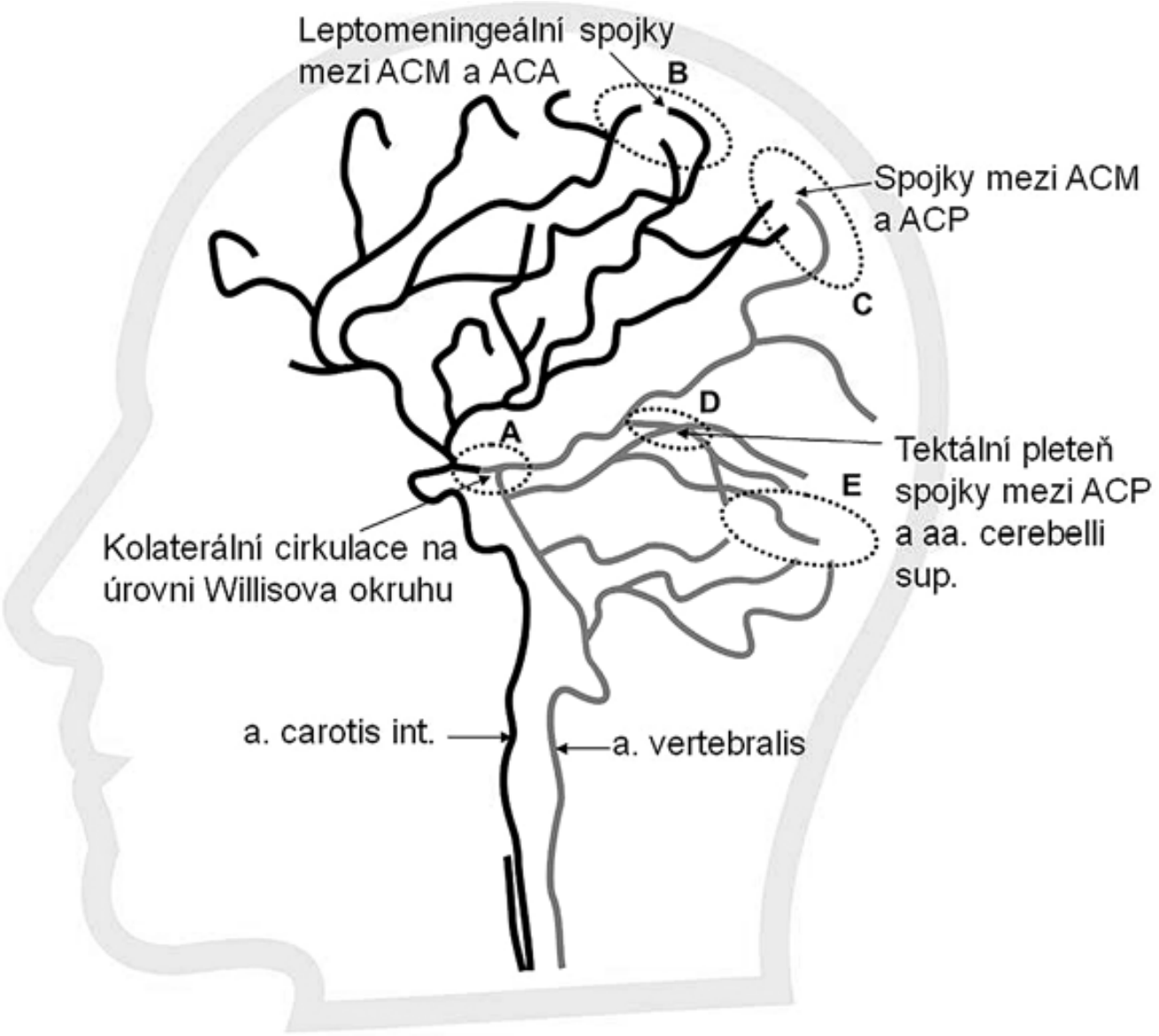
Cortical vascular territories





Extrakraniální systém kolaterální cirkulace

O. Volný, R. Mikulík (2013)
1 Mezinárodní centrum klinického výzkumu (ICRC), Brno
2 Anatomický ústav LF MU, Brno
3 I. neurologická klinika LF MU a FN u sv. Anny v Brně

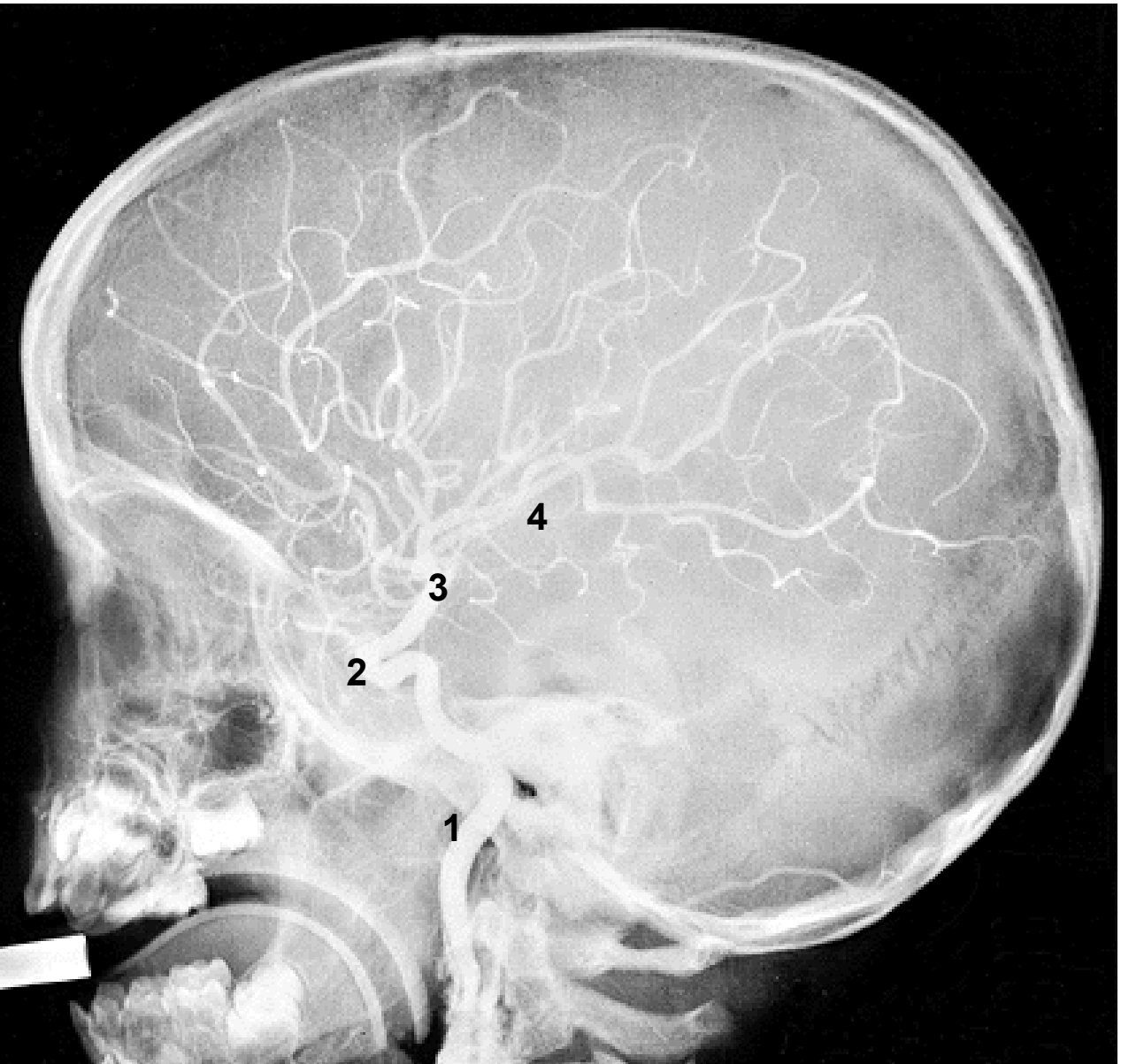


Intrakraniální systém kolaterální cirkulace

O. Volný, R. Mikulík (2013)
1 Mezinárodní centrum klinického výzkumu (ICRC), Brno
2 Anatomický ústav LF MU, Brno
3 I. neurologická klinika LF MU a FN u sv. Anny v Brně

RTG snímek hlavy dítěte v boční projekci

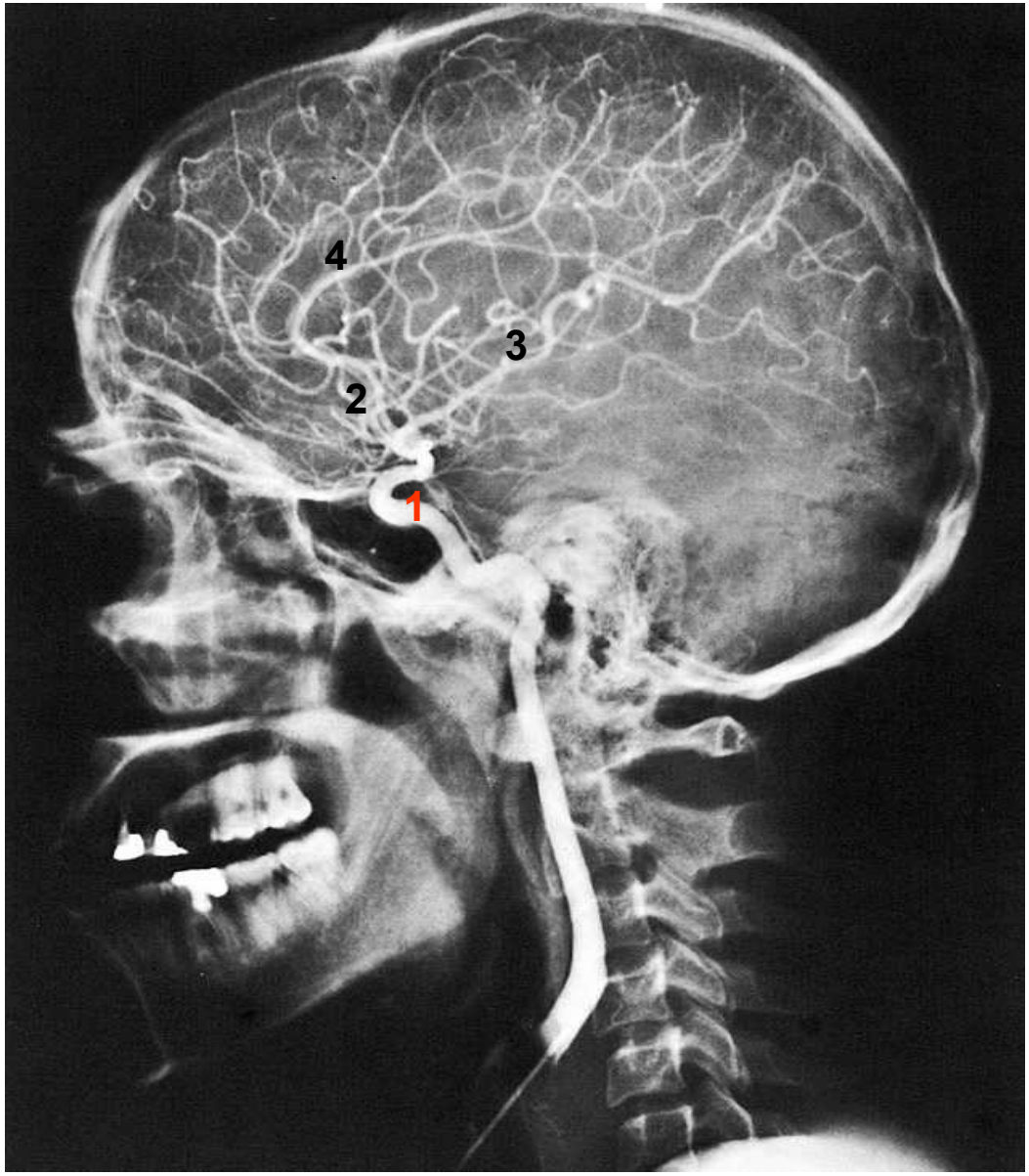
Angiografie = kontrastní vyšetření mozkových cév, větvení a.carotis interna



1. A.carotis interna
2. Karotický sifon
3. A.cerebri anterior
4. A.cerebri media

RTG snímek hlavy v boční projekci

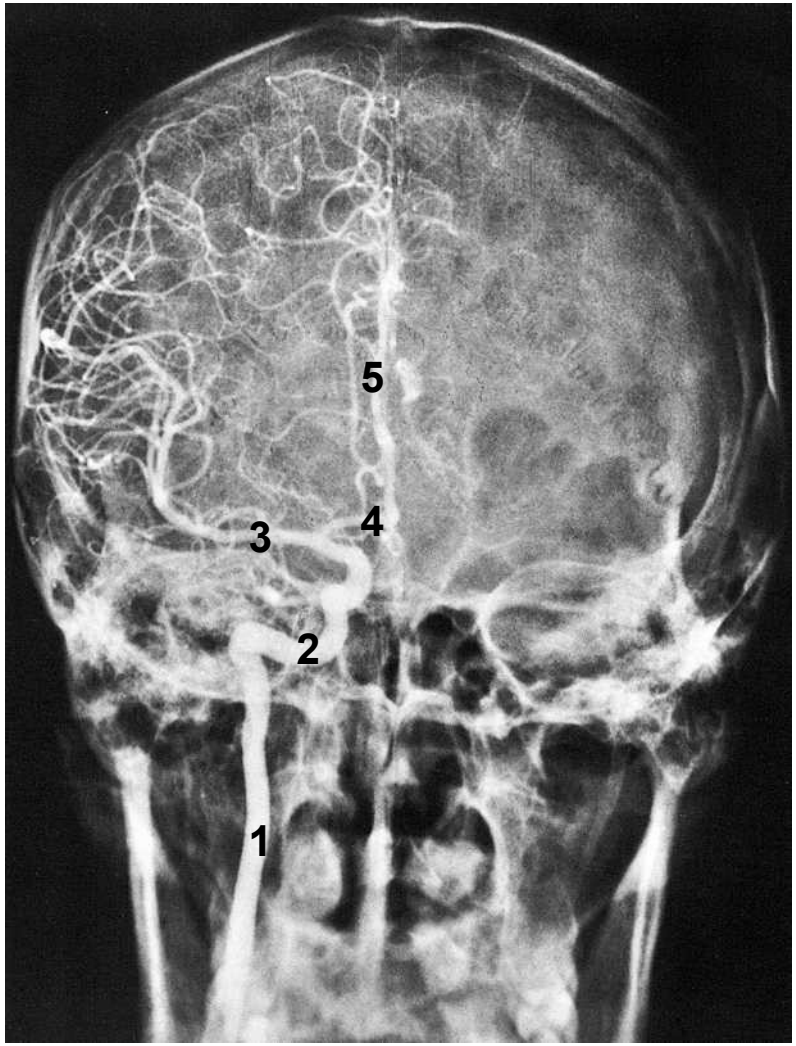
Angiografie - větvení a.carotis interna



1. karotický sifon
2. a.cerebri anterior
3. a.cerebri media
4. a.pericallosa

RTG snímek hlavy v předozadní projekci

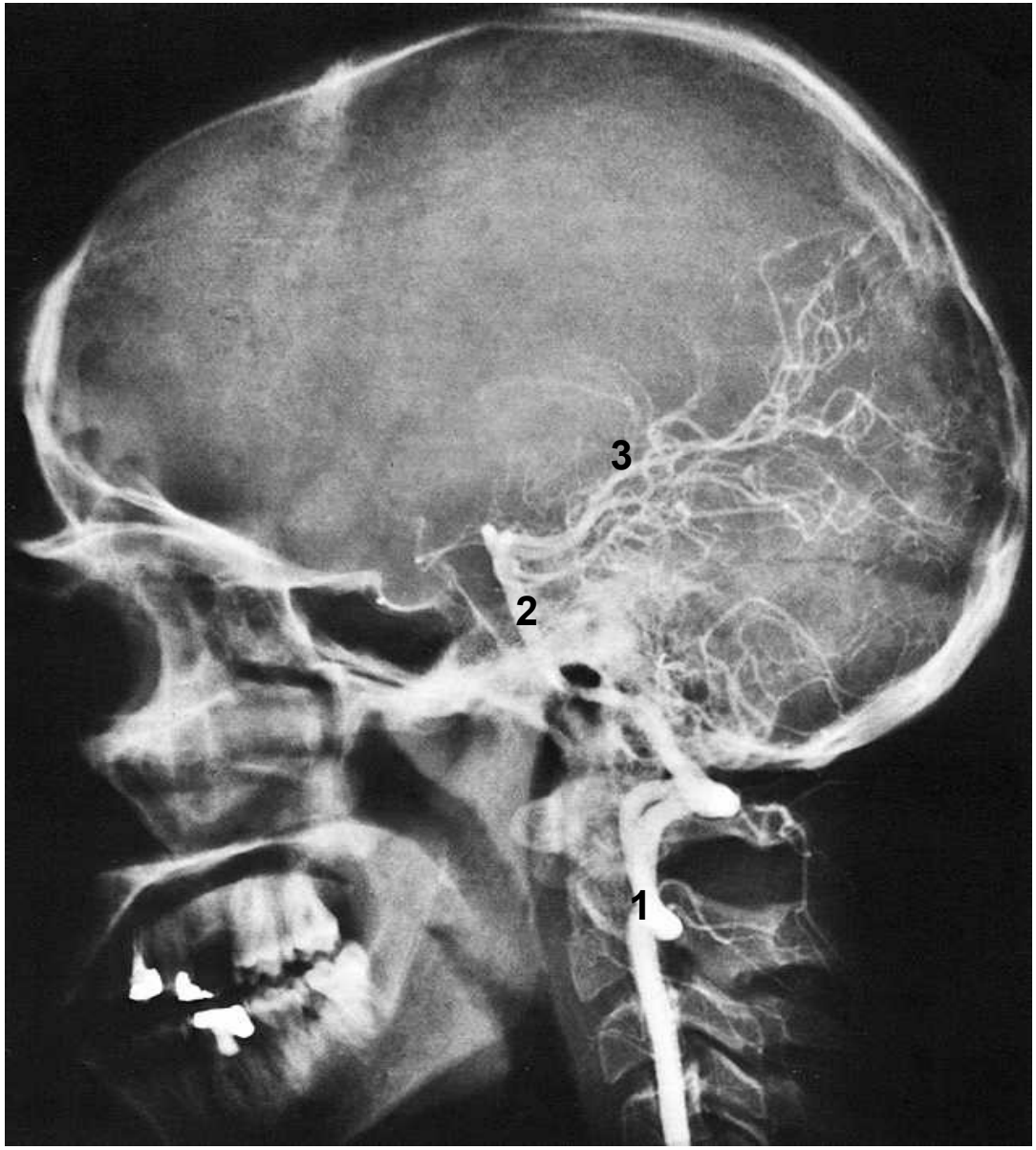
Angiografie - větvení a. carotis interna



1. a.carotis interna
2. karotický sifon
3. a.cerebri media
4. a.cerebri anterior
5. a.pericallosa

RTG snímek hlavy v boční projekci

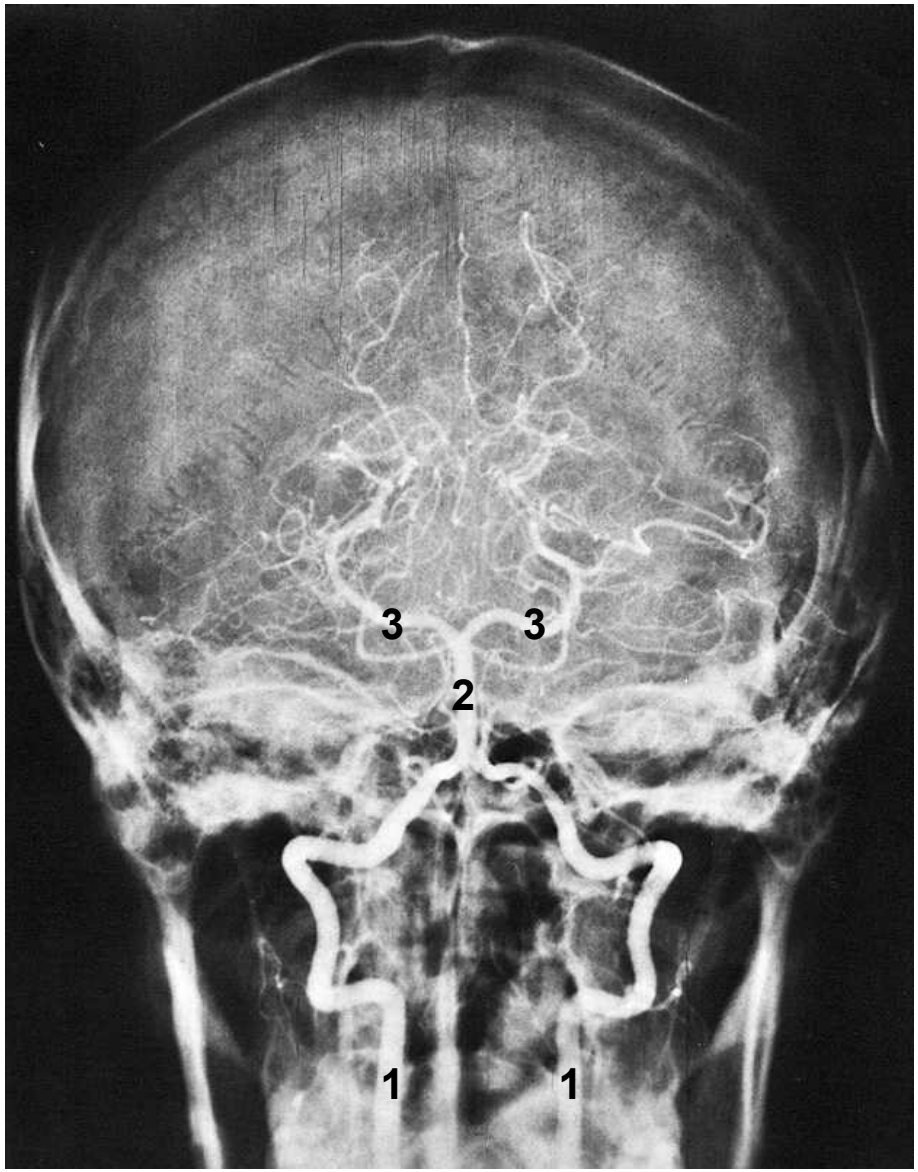
Angiografie - větvení a. vertebralis



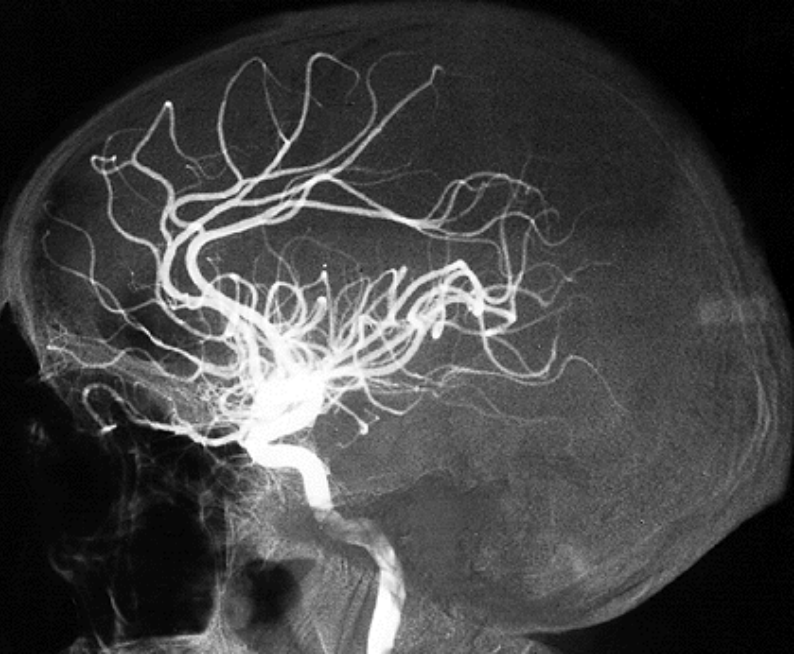
1. A.vertebralis
2. A.basilaris
3. A.cerebri posterior

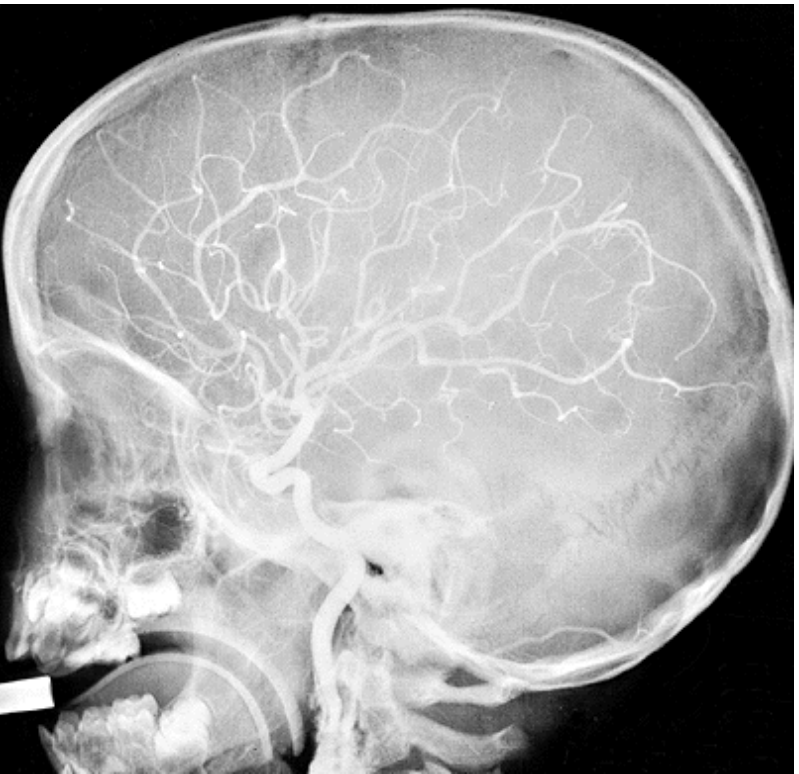
RTG snímek hlavy v předozadní projekci

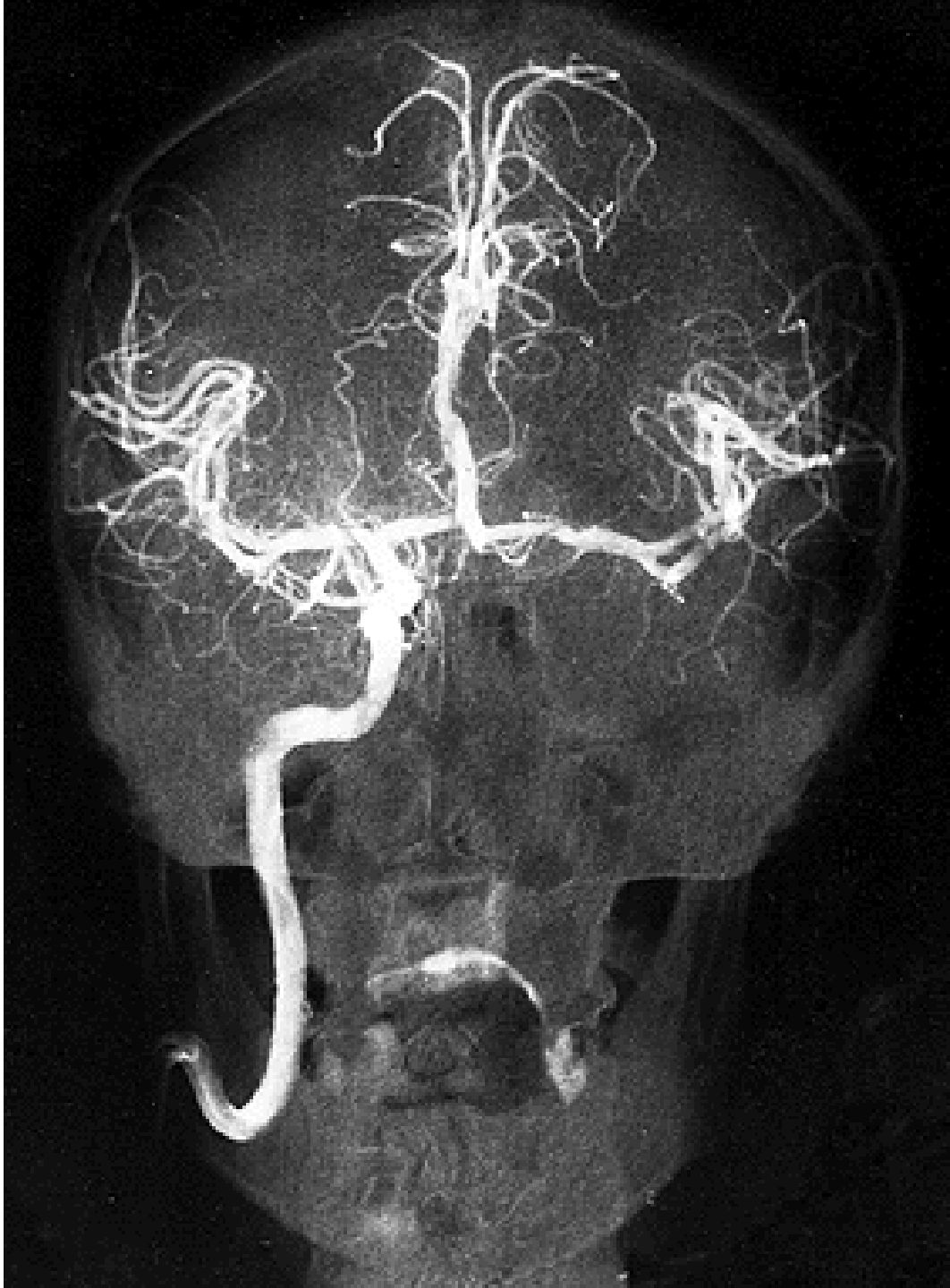
Angiografie - větvení a.vertebralis



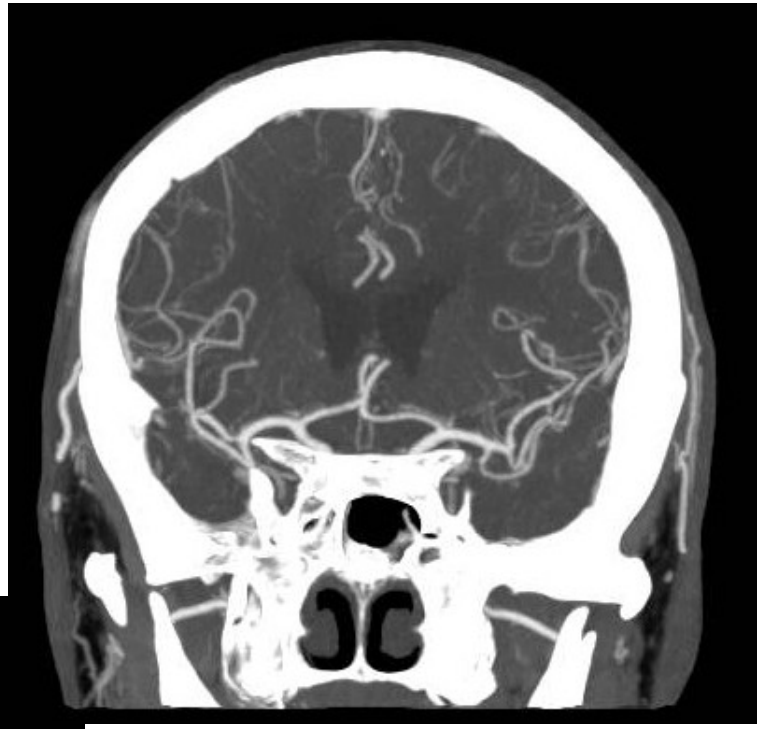
1. A.vertebralis dextra, sinistra
2. A.basilaris
3. Aa.cerebri posteriores





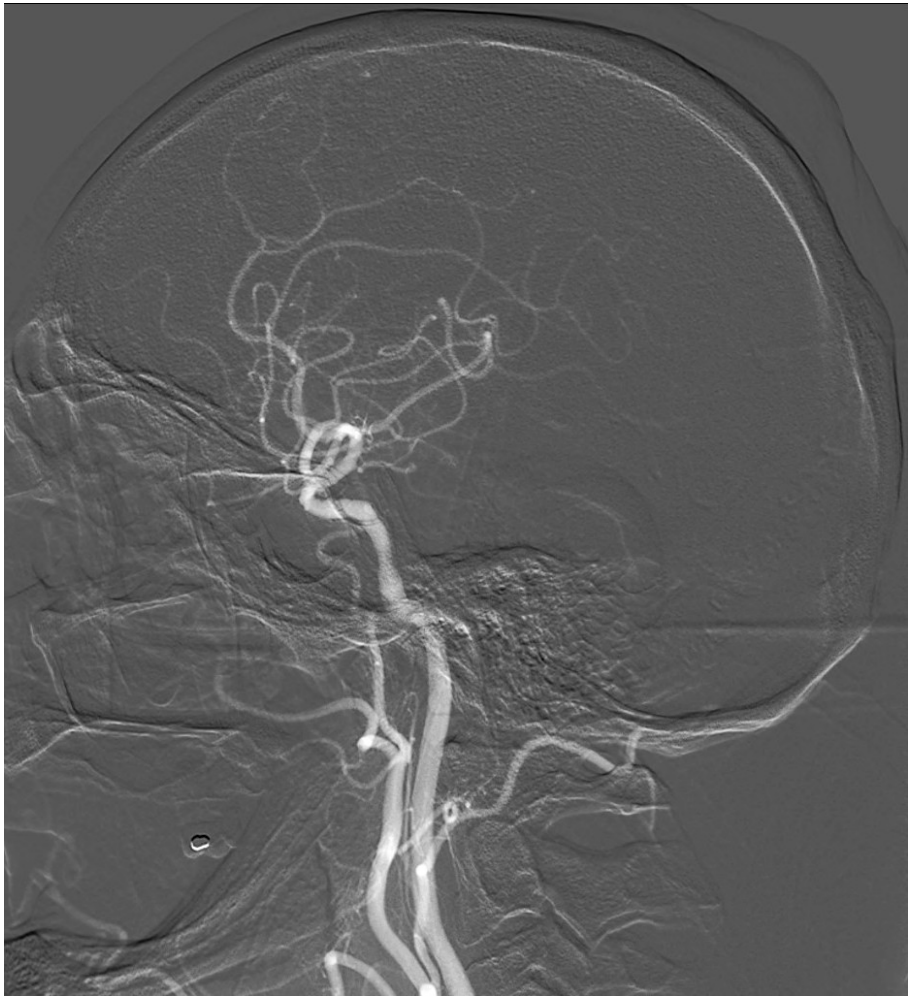


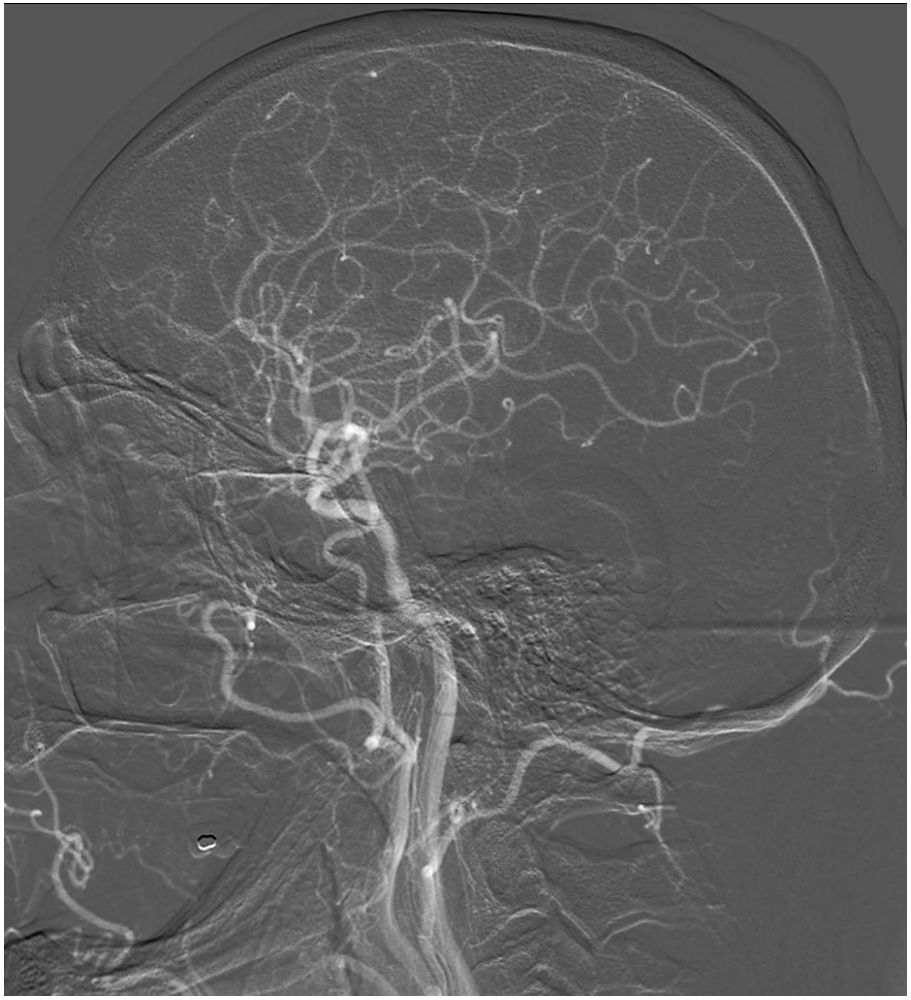
CT vyšetření s rychlým nitrožilním podáním kontrastní látky **CT angiografie** (**CTA**)



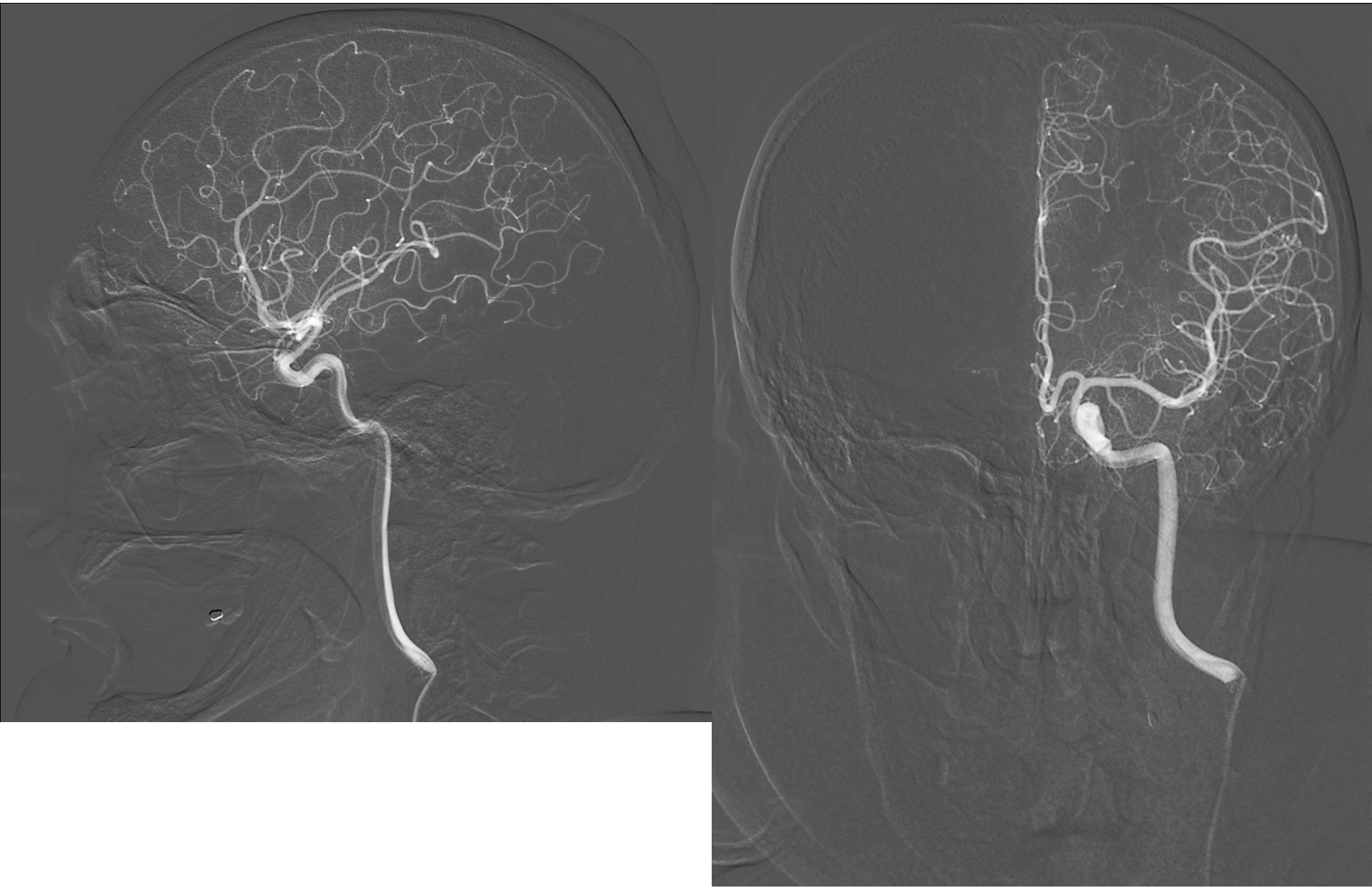
SONOGRAFIE - po nástřiku kontrastní látky, a. carotis interna

SONOGRAFIE - po nástřiku kontrastní látky, a. carotis interna

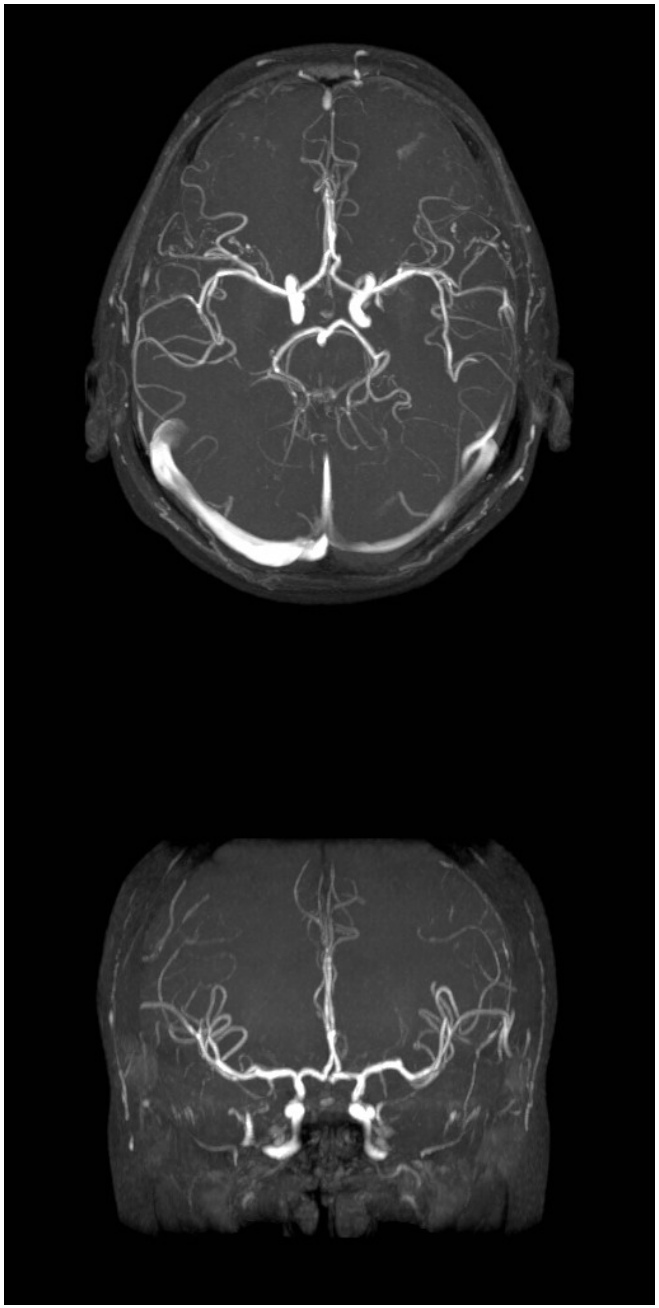


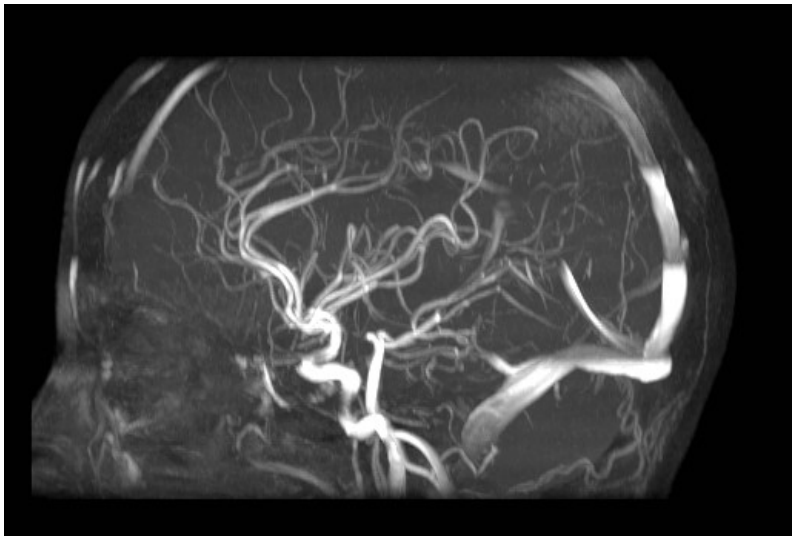


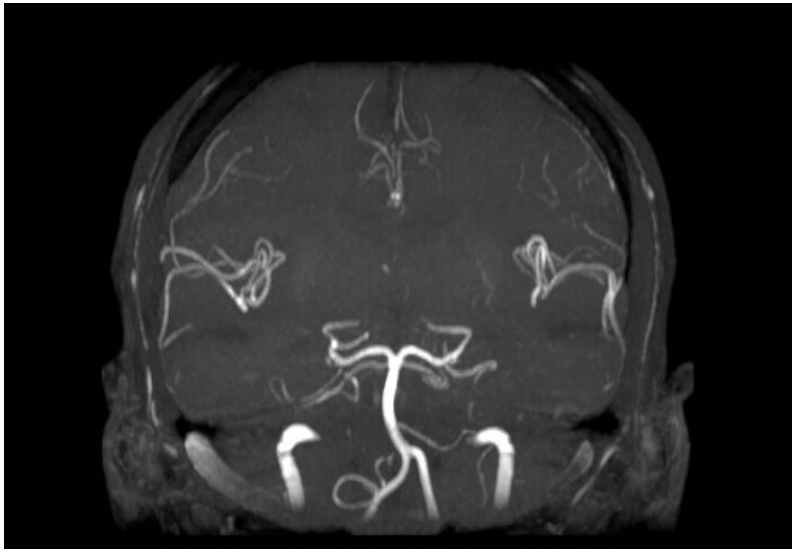
SONOGRAFIE - po nástřiku kontrastní látky, a. carotis interna



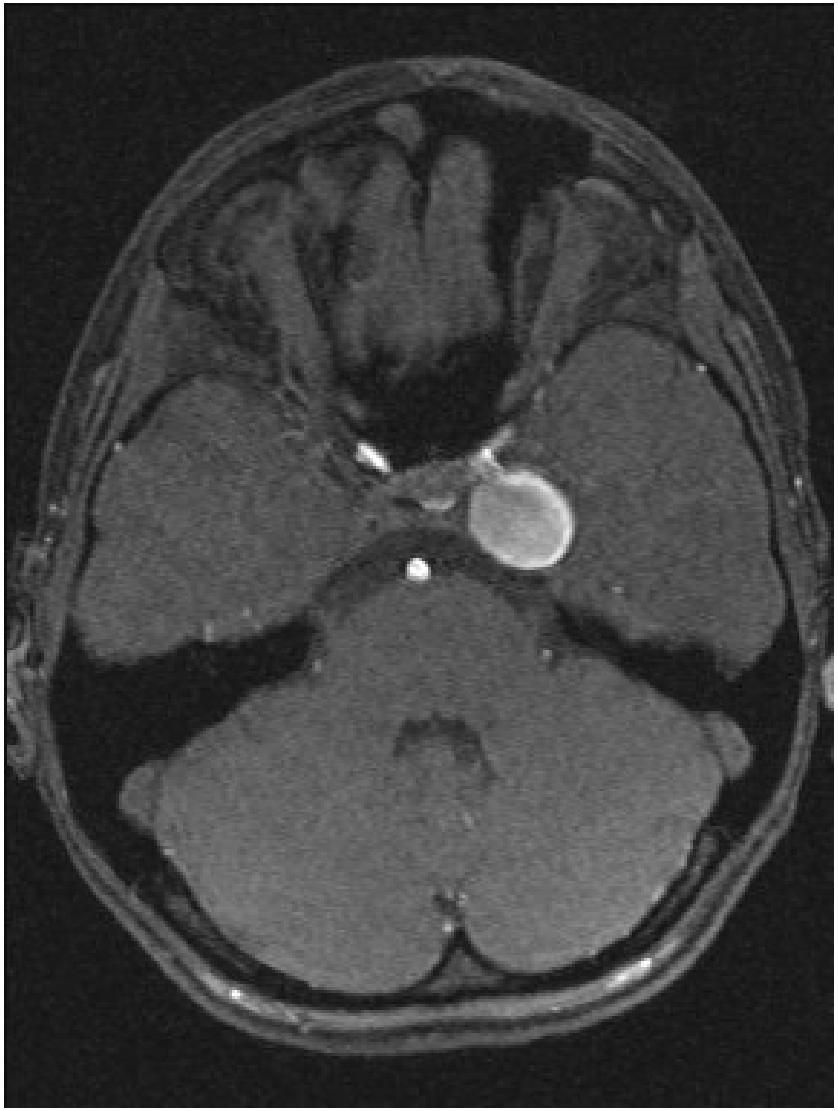
MR angiografie



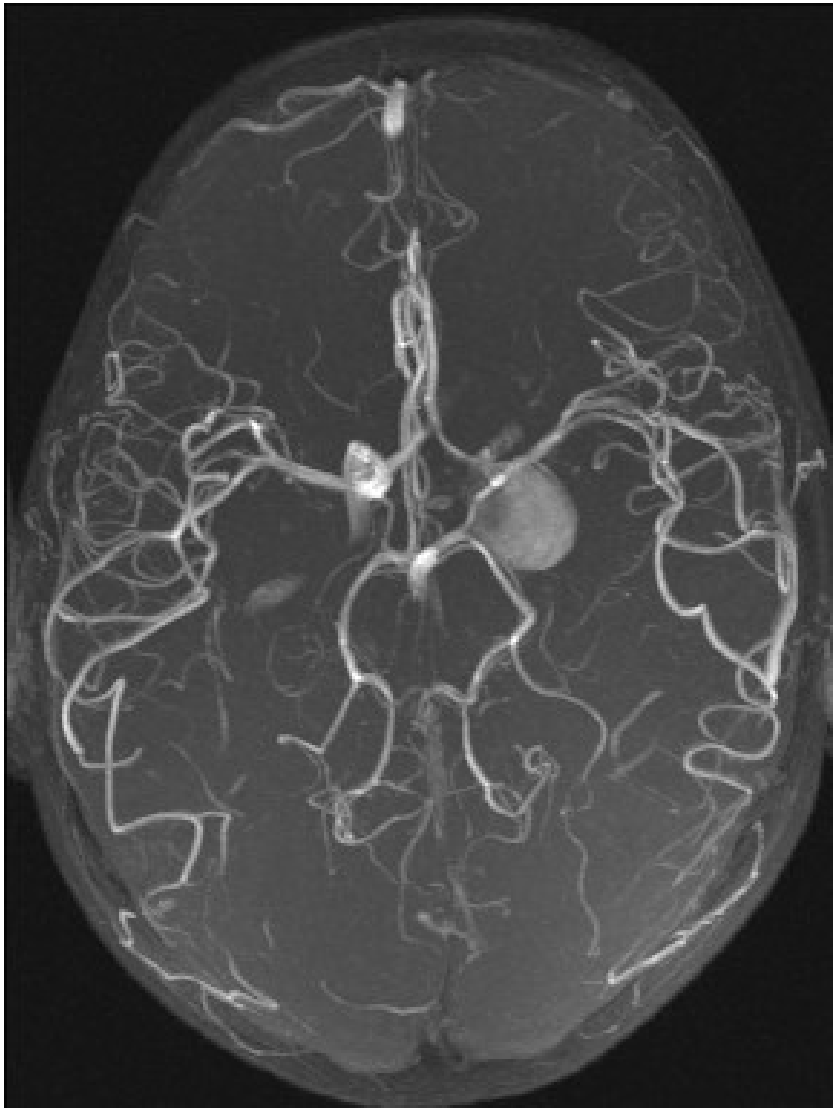




Cévní zásobení mozku -aneurizma



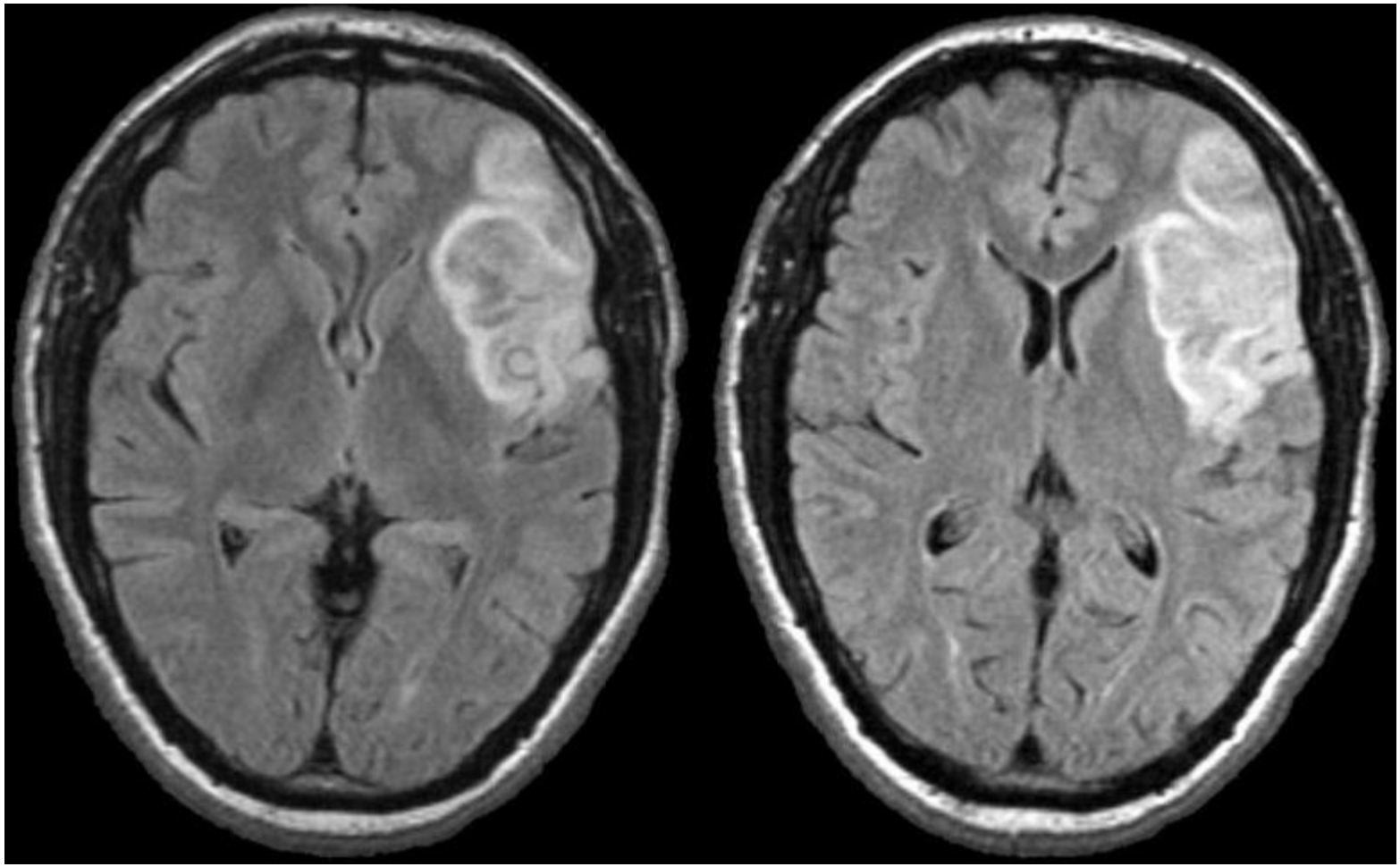
MR angiografie (MRA)



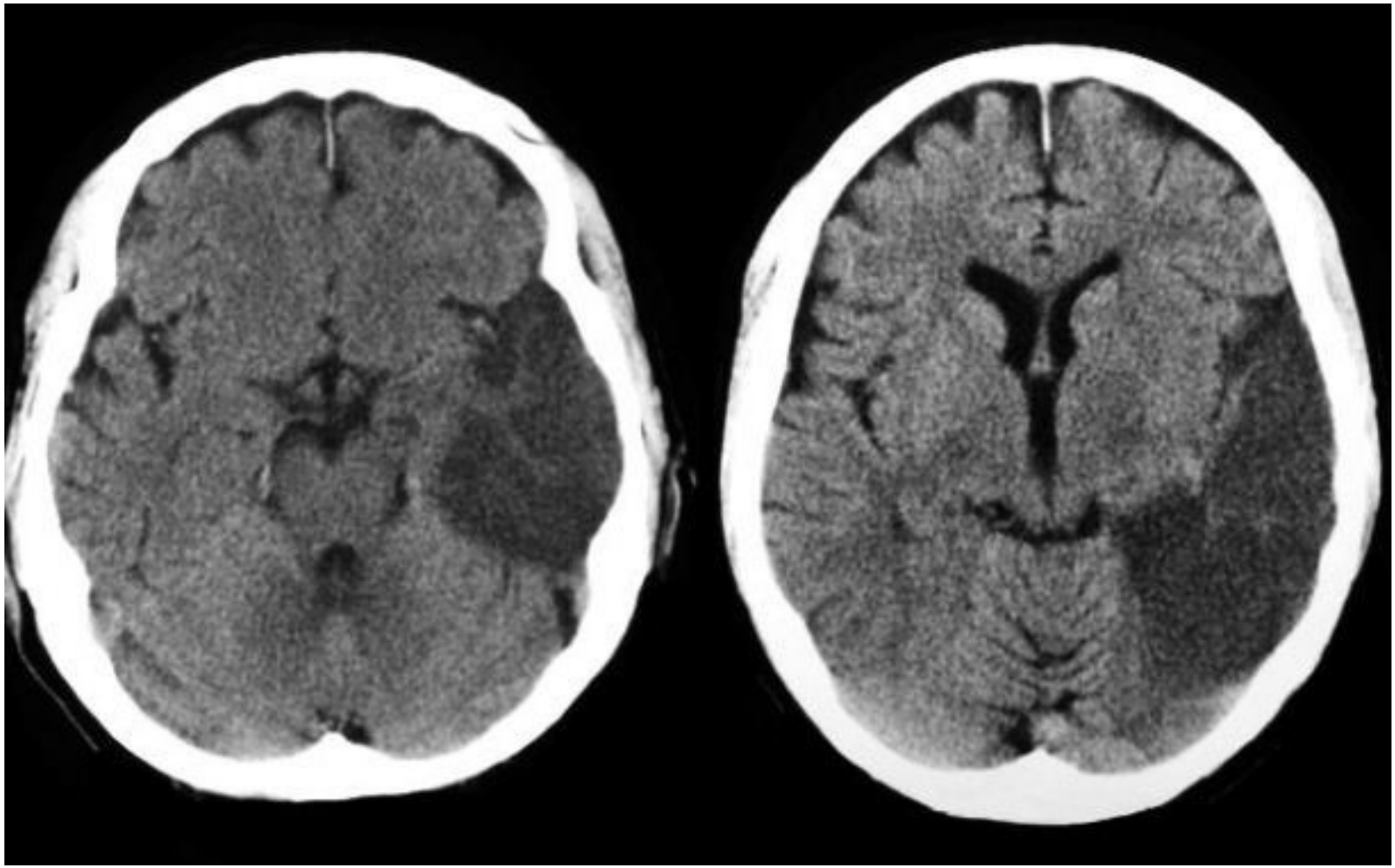
CT angiografie (CTA)

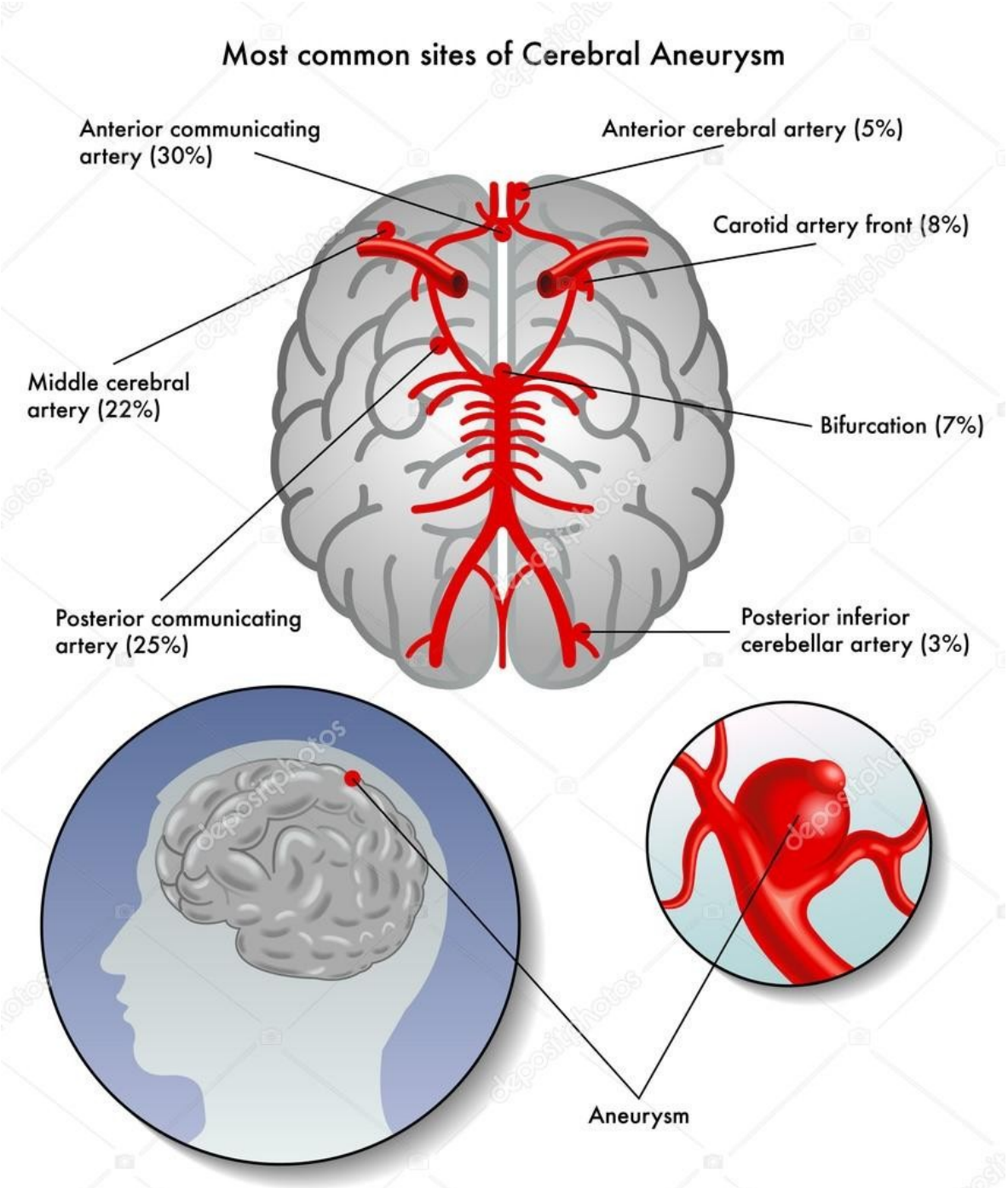
MR - 3D rekonstrukce po odstranění ostatních struktur

Obraz infarktu levého frontálního kortexu v MRI

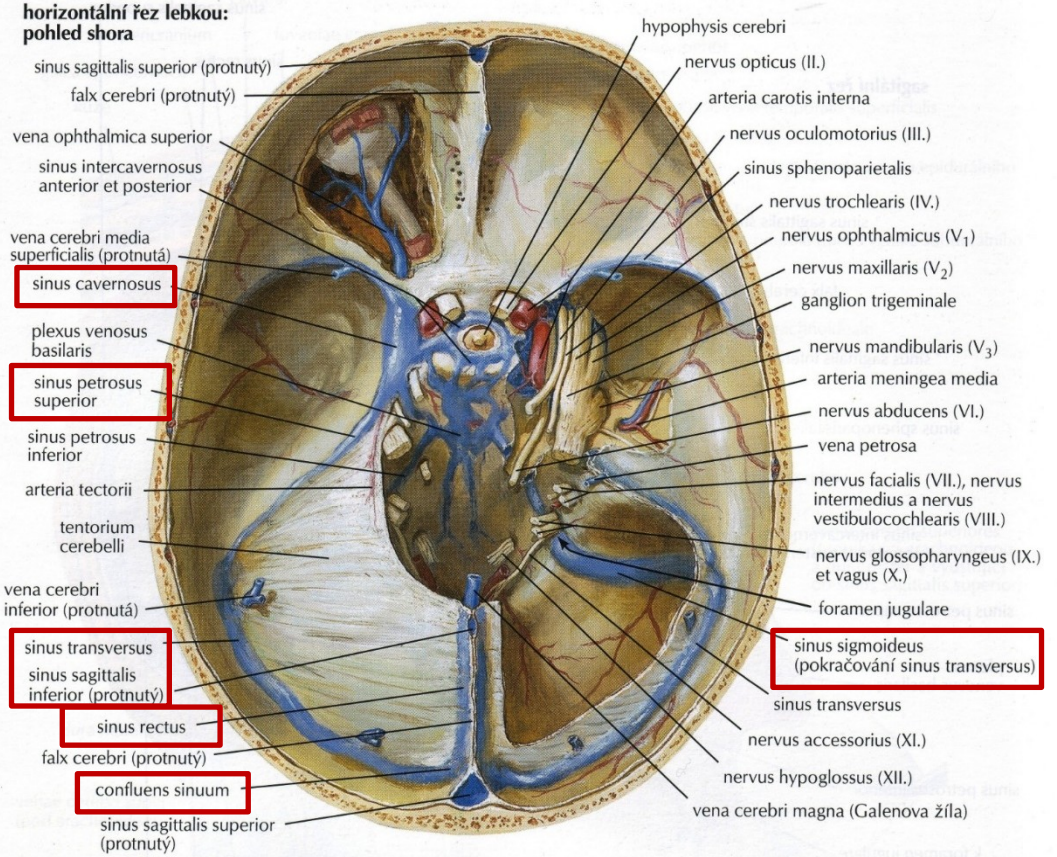


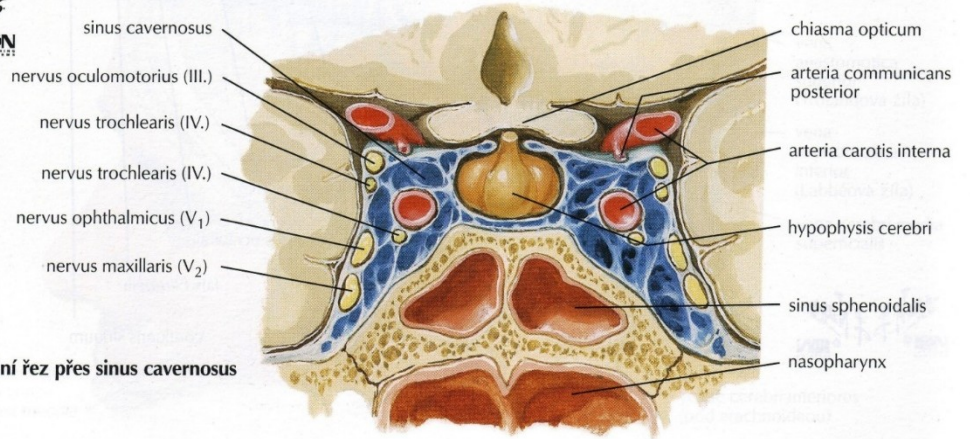
Obraz infarktu levého temporálního kortexu v CT




Most common sites of Cerebral Aneurysm
Anterior communicating artery (30%)
Anterior cerebral artery (5%)
Carotid artery front (8%)
Middle cerebral artery (22%)
Bifurcation (7%)
Posterior communicating artery (25%)
Posterior inferior cerebellar artery (3%)
Aneurysm

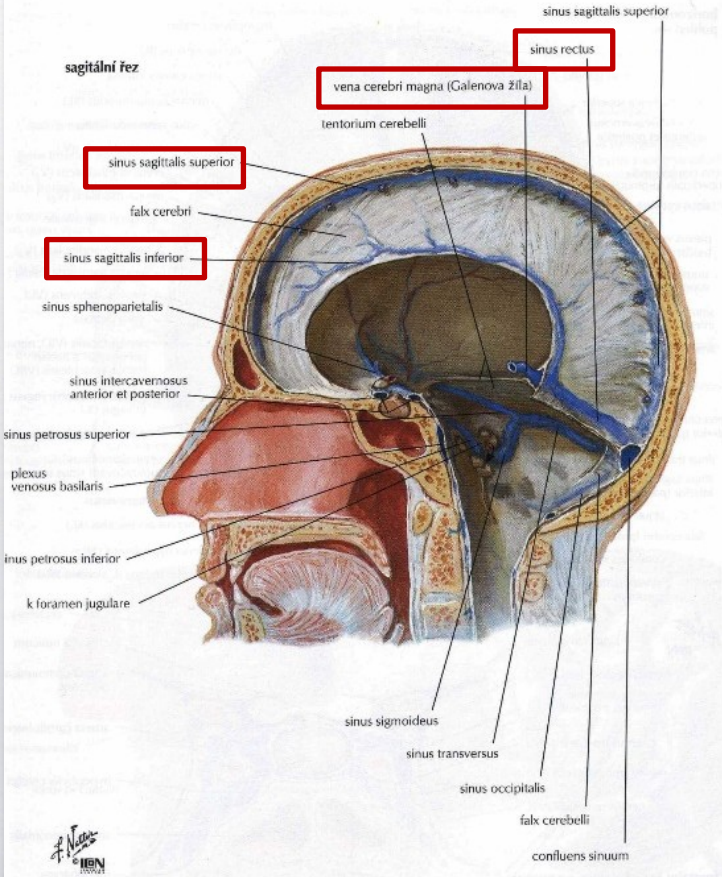
horizontální řez lebkou: pohled shora





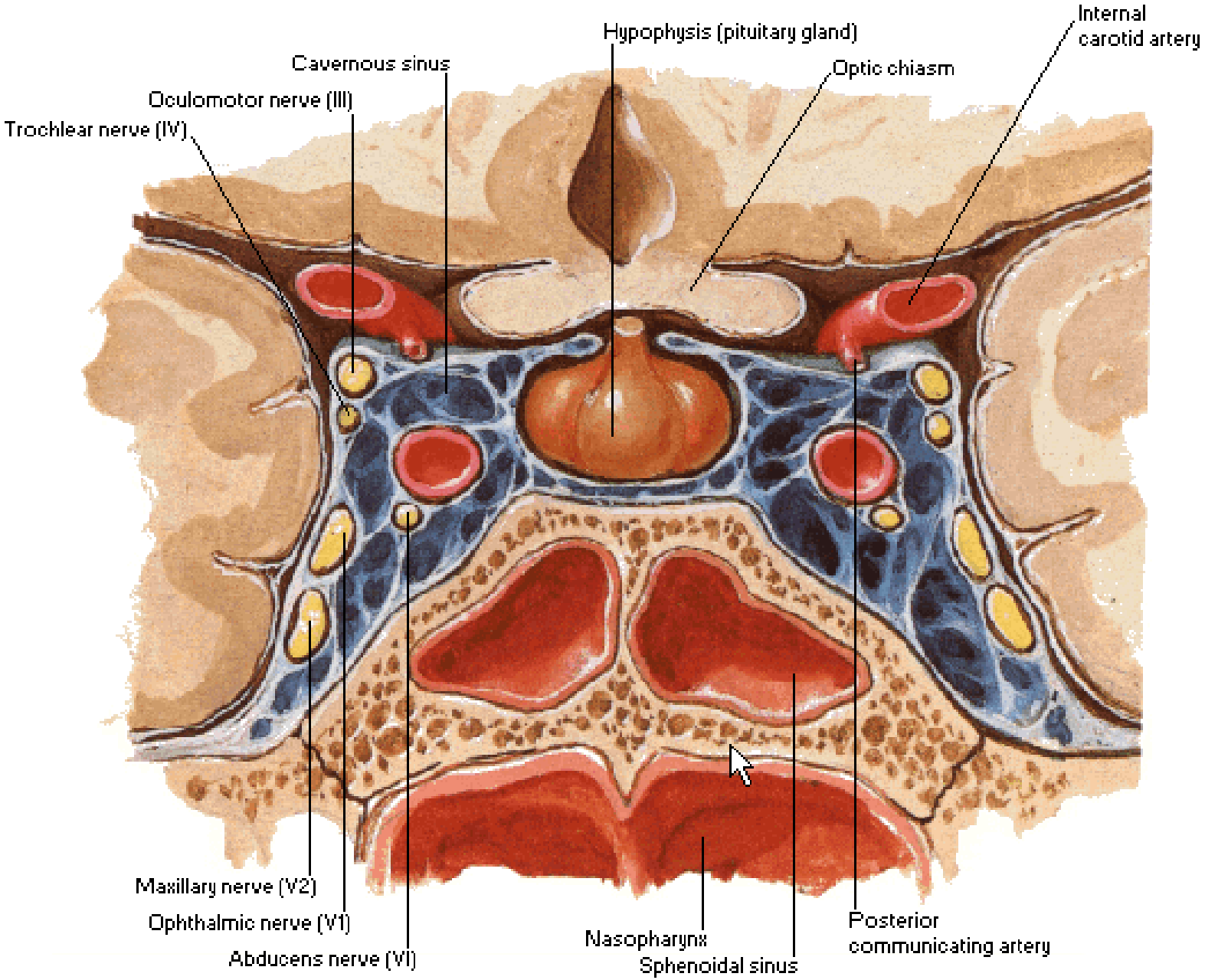
frontální řez přes sinus cavernosus

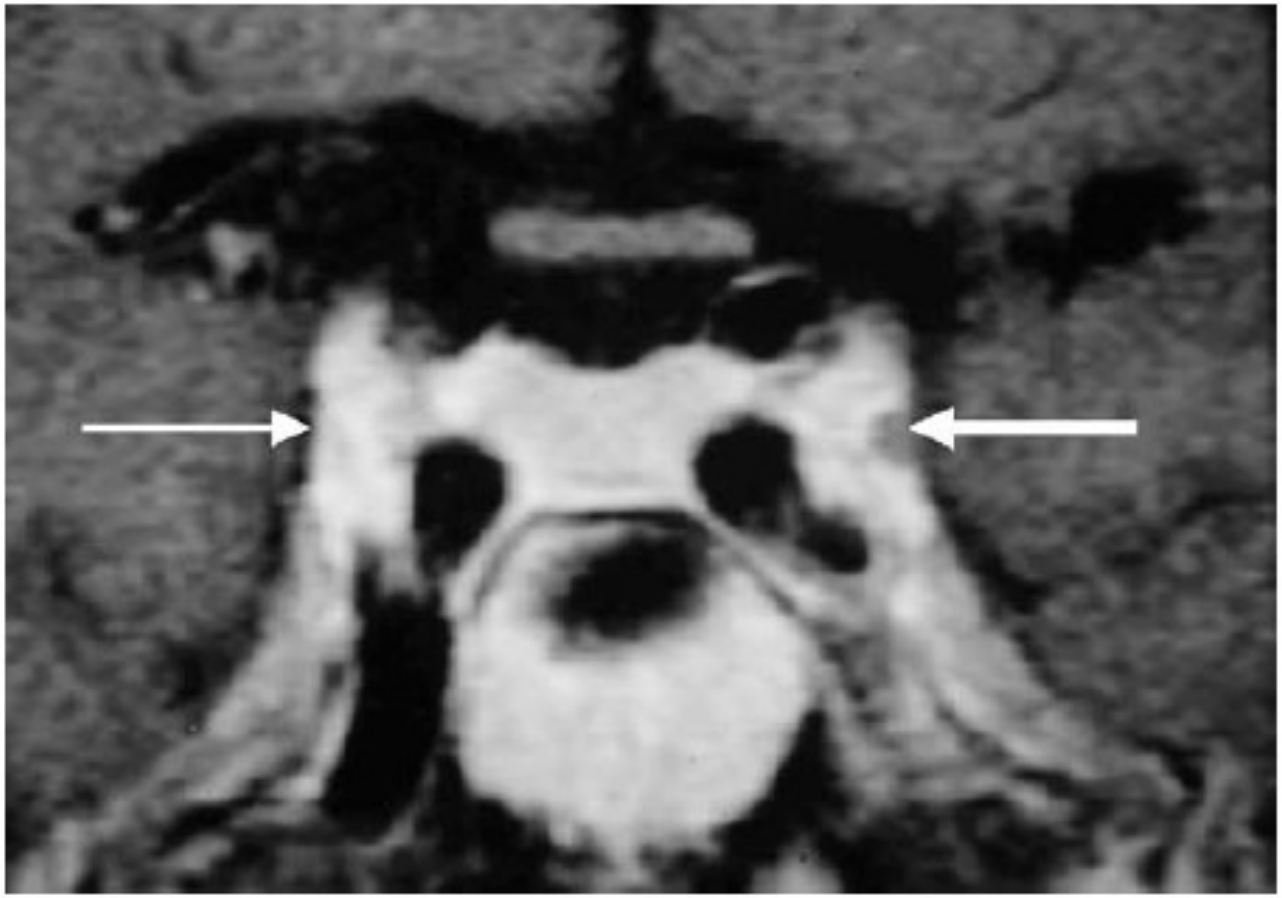
sagitální řez

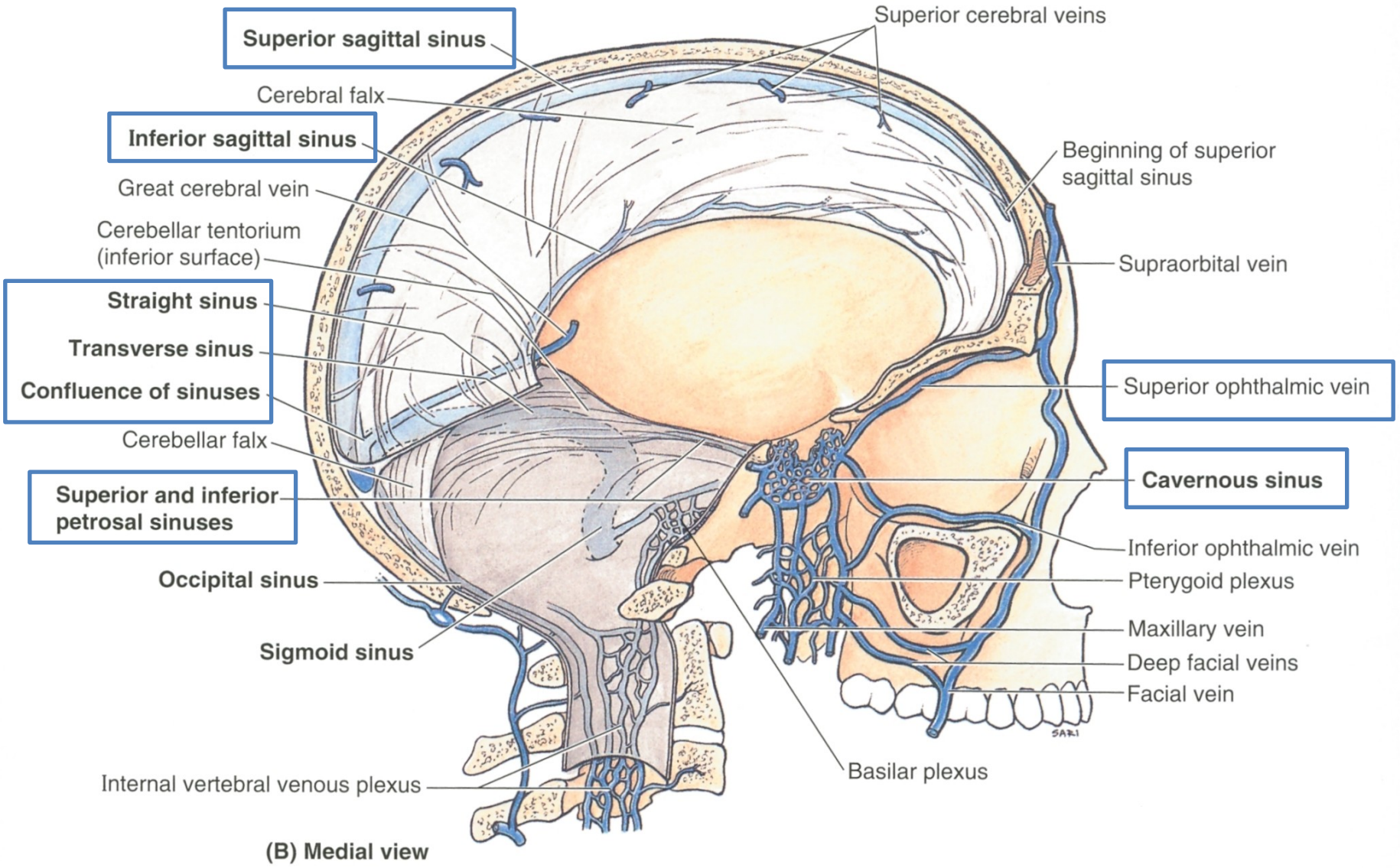


Cavernous Sinus

Coronal Section







(B) Medial view