Anatomical and Physiological Substantiations of the Operative Interventions on the Head

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Topographical anatomy is a science about the dimensional structure of healthy human body organs, tissues and parts of the body

- The operative surgery is a science about surgical operations, methods of surgical operations, the essence of which comes to mechanical action upon the organs and tissues with diagnostic, medical or reconstructive purpose.

Classification of operations

- Emergency
- Urgent
- Planned

- Bloodless
- Bloody

- Radical
- Palliative

- Single stage
- Stage operations

Operative approach means to make the wound for the exposure of the organ to be operated on

Operative method – the main part of the operation, performing the action contained in the name of the operation

Suture material

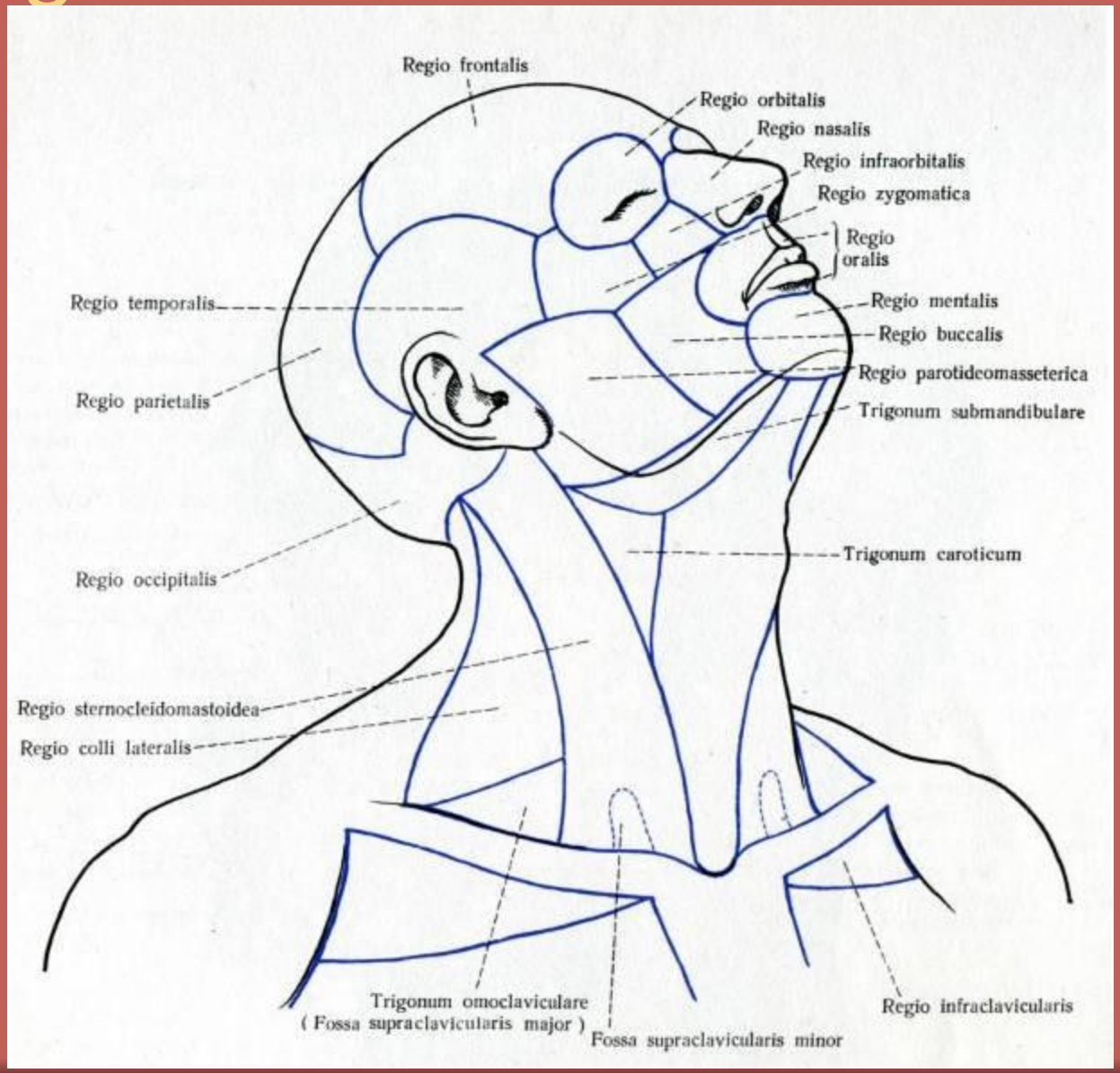
- Absorbable
- Plain catgut
- Chromic catgut
- Polyglycolic synthetics

- Nonabsorbable
- Natural (silk, cotton)
- Synthetic braids (Ticron, Tevdek, Ethibond)
- Synthetic monofilament (nylon, Prolen)
- Monofilament stainless
- Steel wire

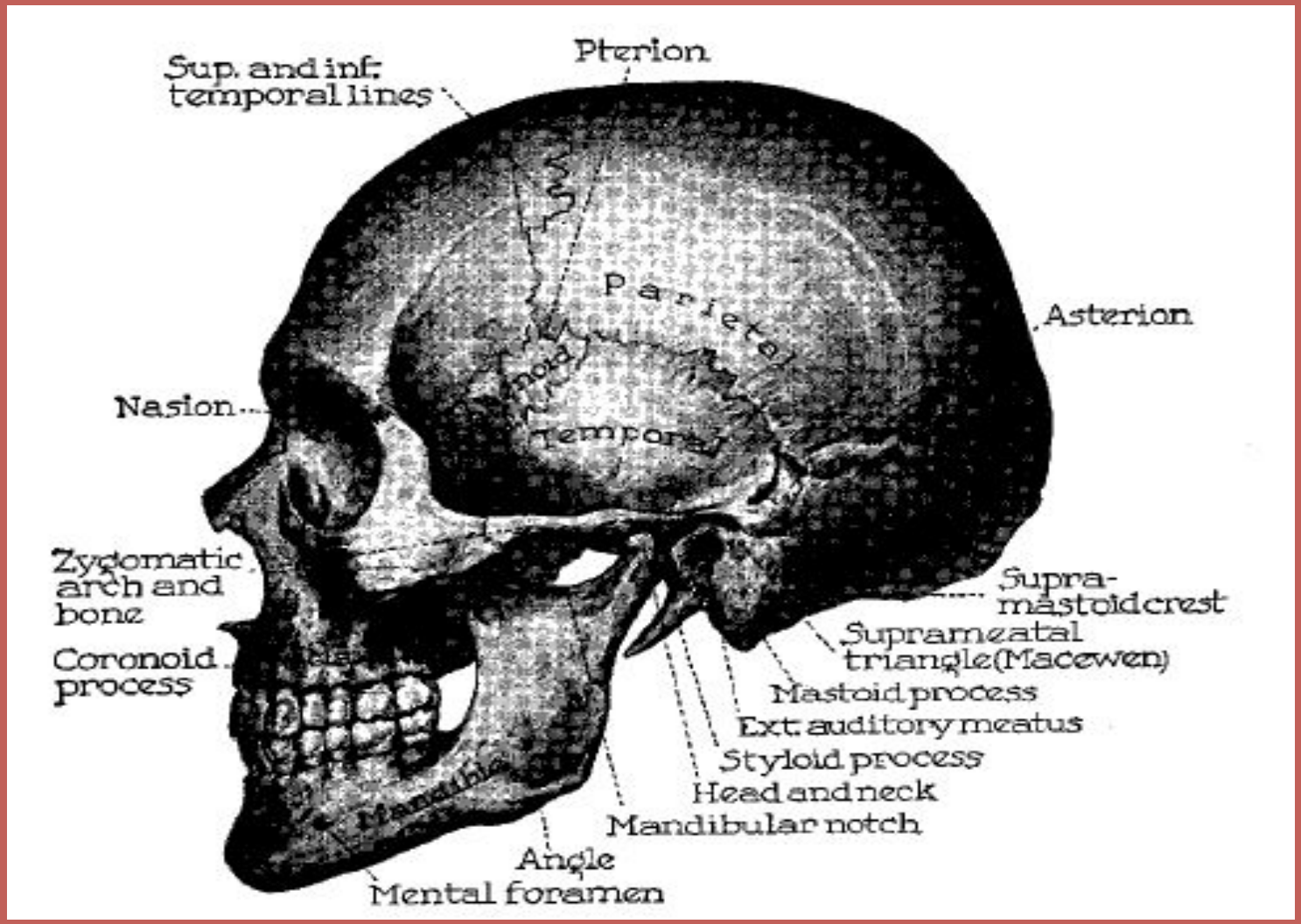
Type of sutures

- Interrupted
- Continuous

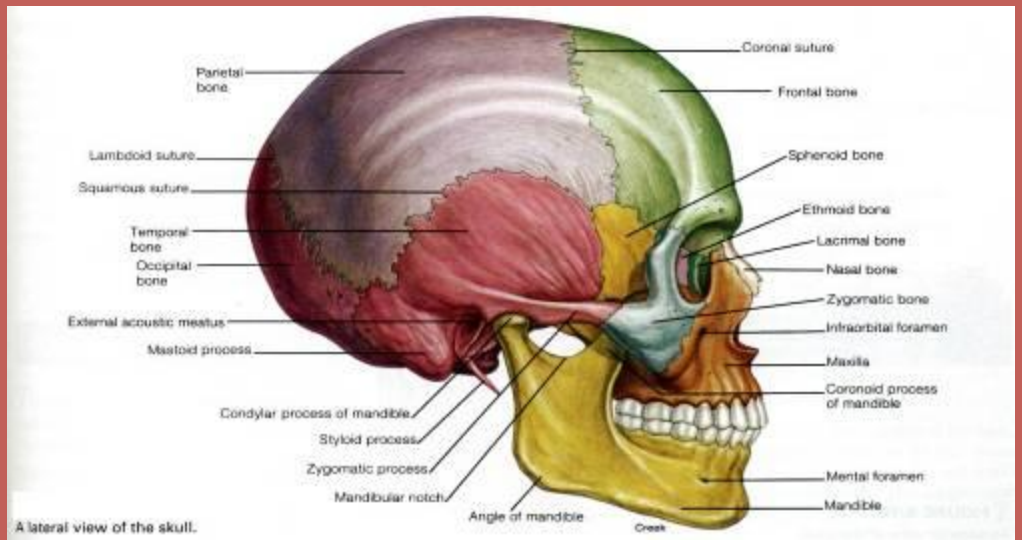
Regions of the Head and Neck



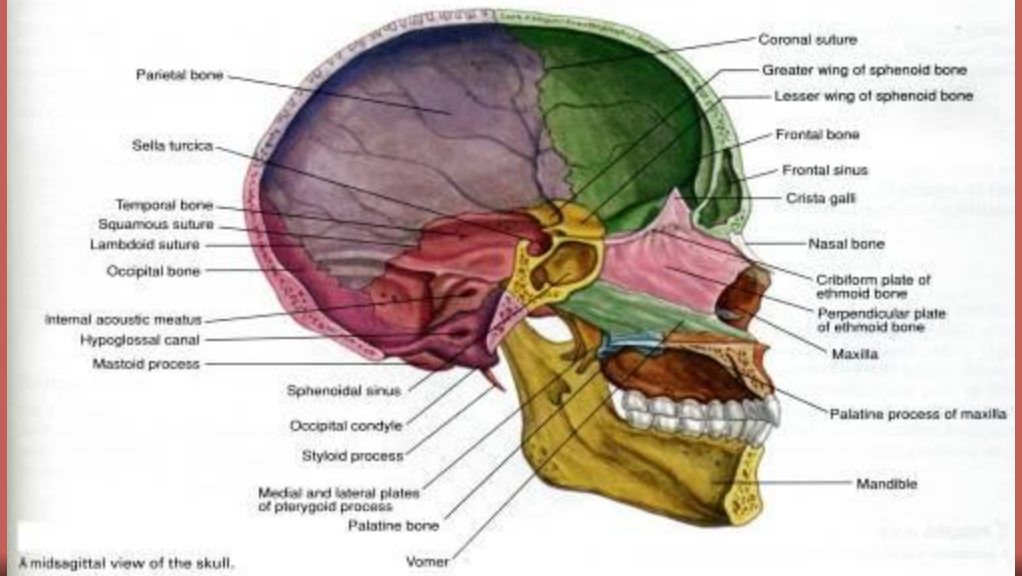
Side view of the skull (norma lateralis).



A Latral view of the Skull

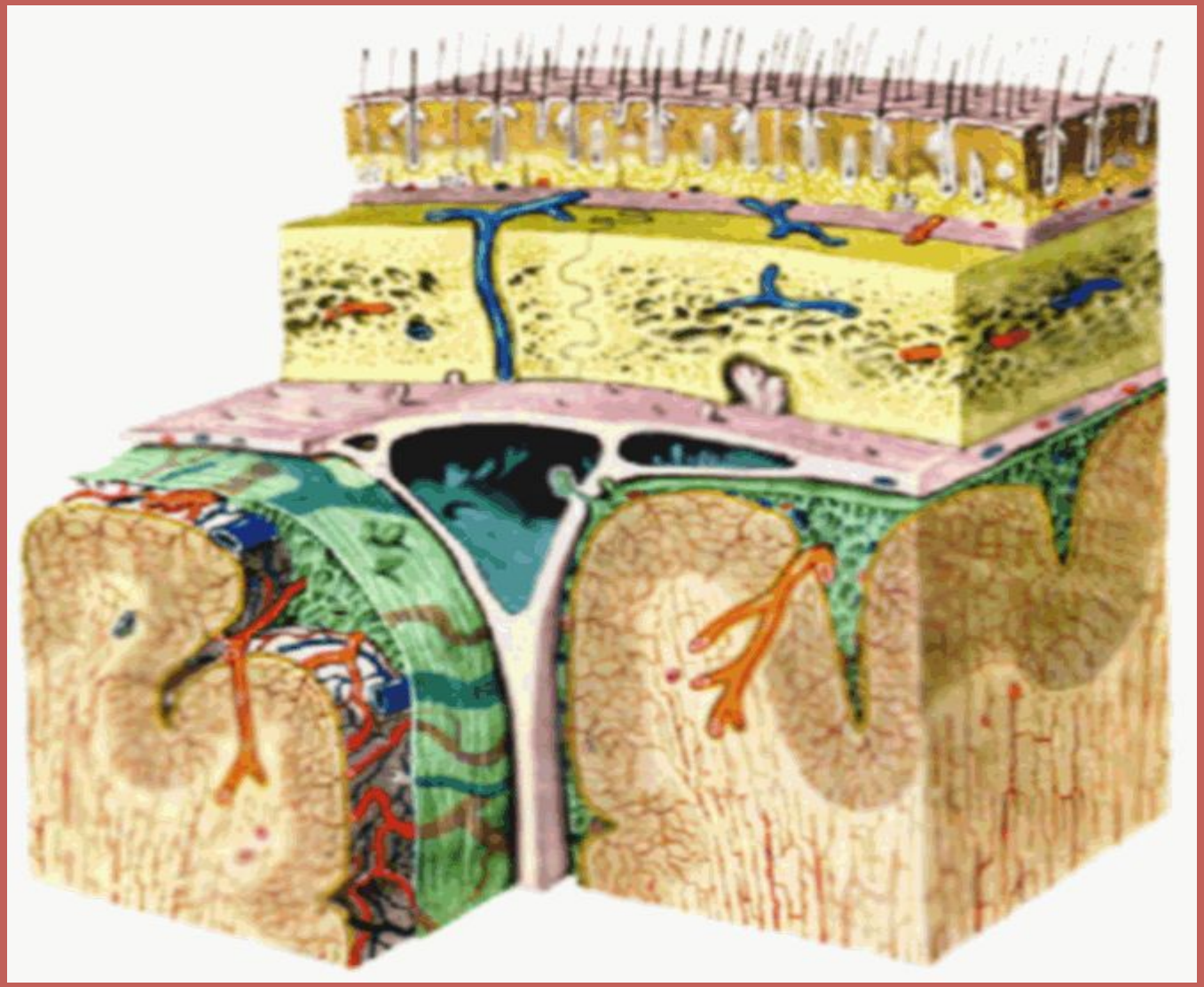


A lateral view of the skull.



A midsagittal view of the skull.

Layer Structure of Fronto-Parieto-Occipital Region



Layer Structure of Fronto-parieto-occipital Region

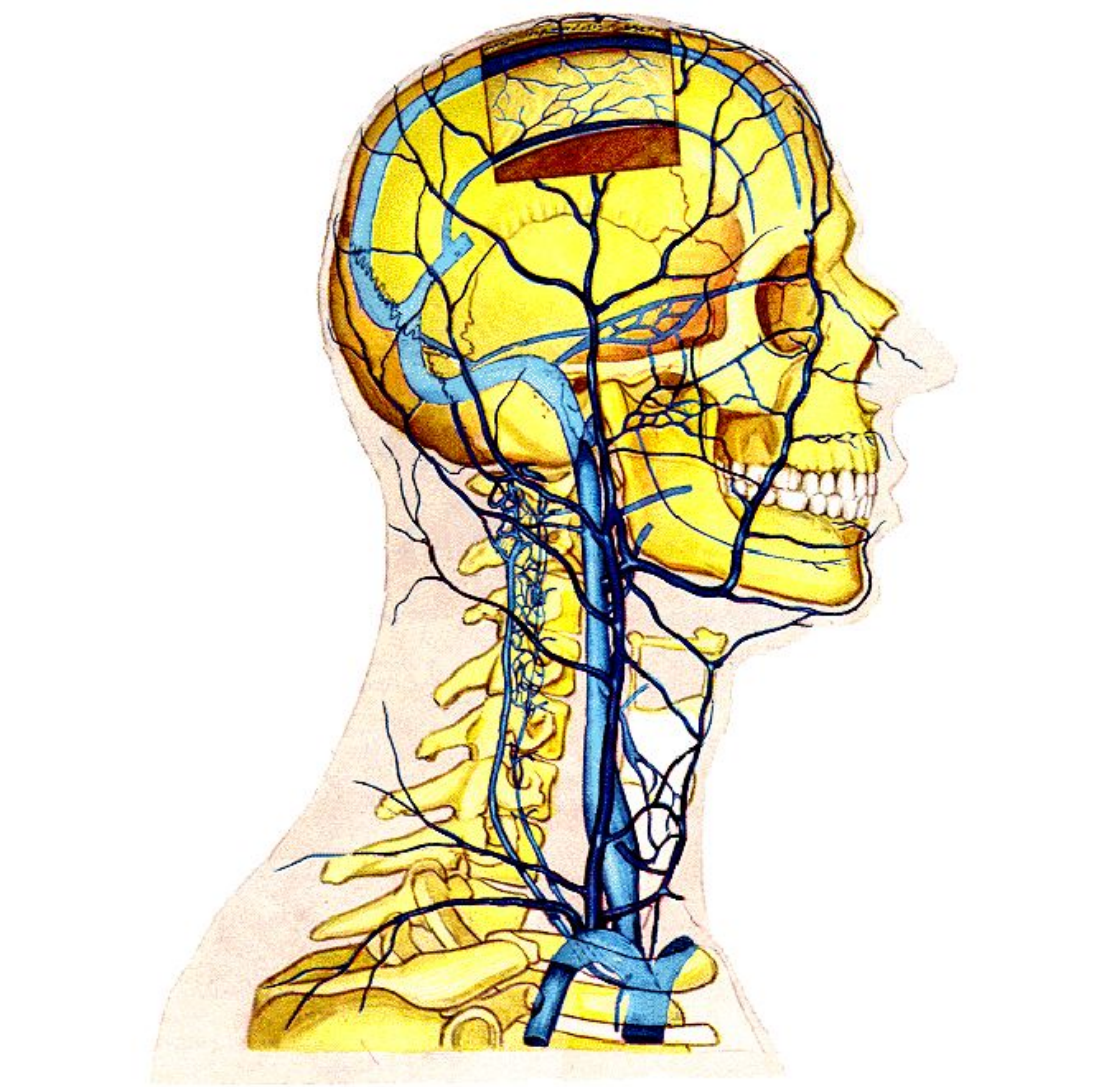
1. Skin;
2. subcutaneous tissues;
3. gala aponeurotica;
4. loose areolar tissue;
5. periosteum (pericranium);
6. loose areolar tissue;
7. bone (internal, external lamina and diploe);
8. dura mater.

Head and Neck Arteries

Arterial and nerve supply of the Scalp

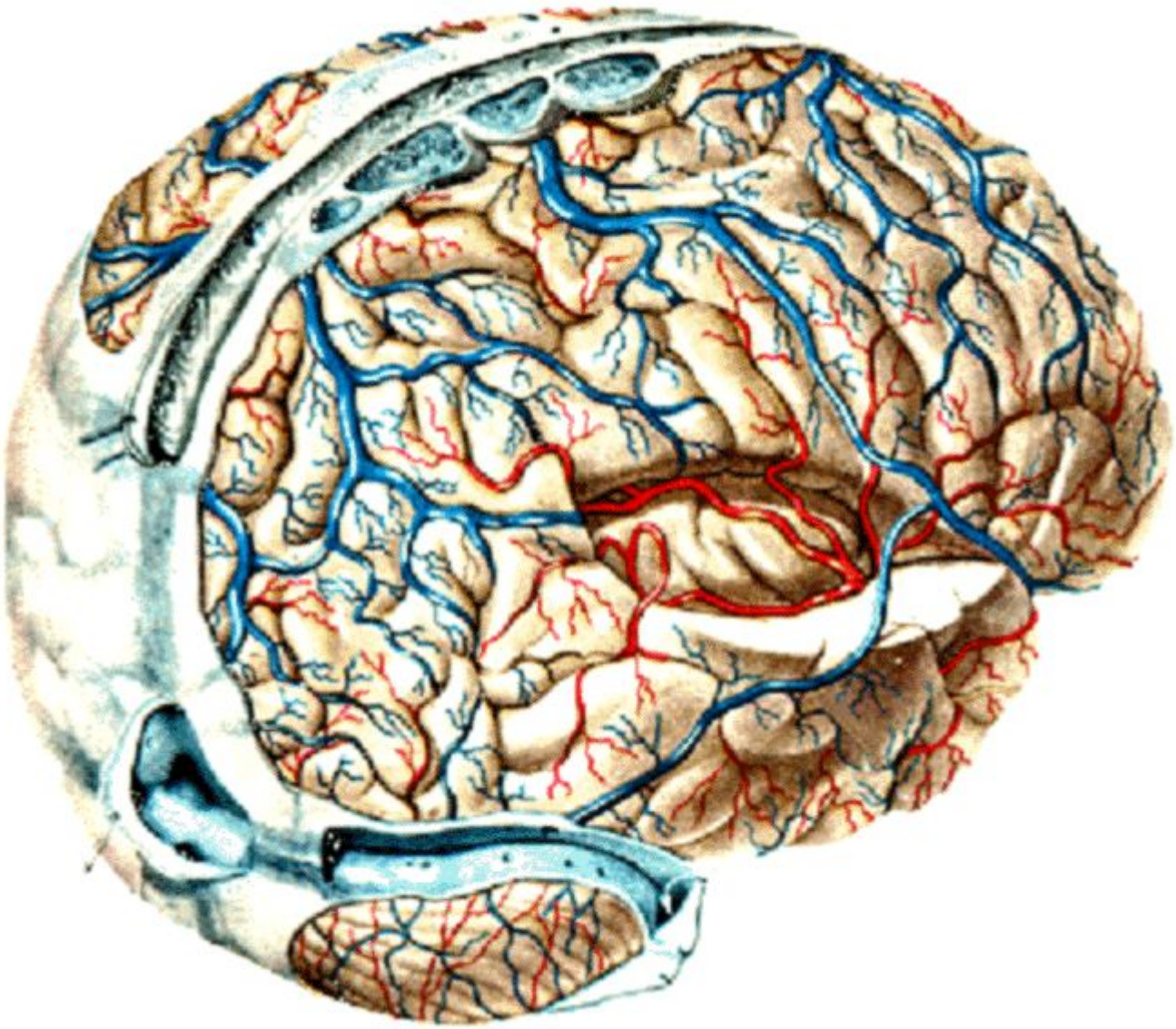
- The supratrochlear and the supraorbital arteries in company with supratrochlear and the supraorbital nerves.
- The superficial temporal artery,zygomaticotemporal and auriculotemporal nerve.
- The posterior auricular artery and lesser occipital nerve (cervical plexus C2)
- The occiptal artery and greater occipital nerve (posterior ramus of the second cervical nerve).

Head and Neck Veins

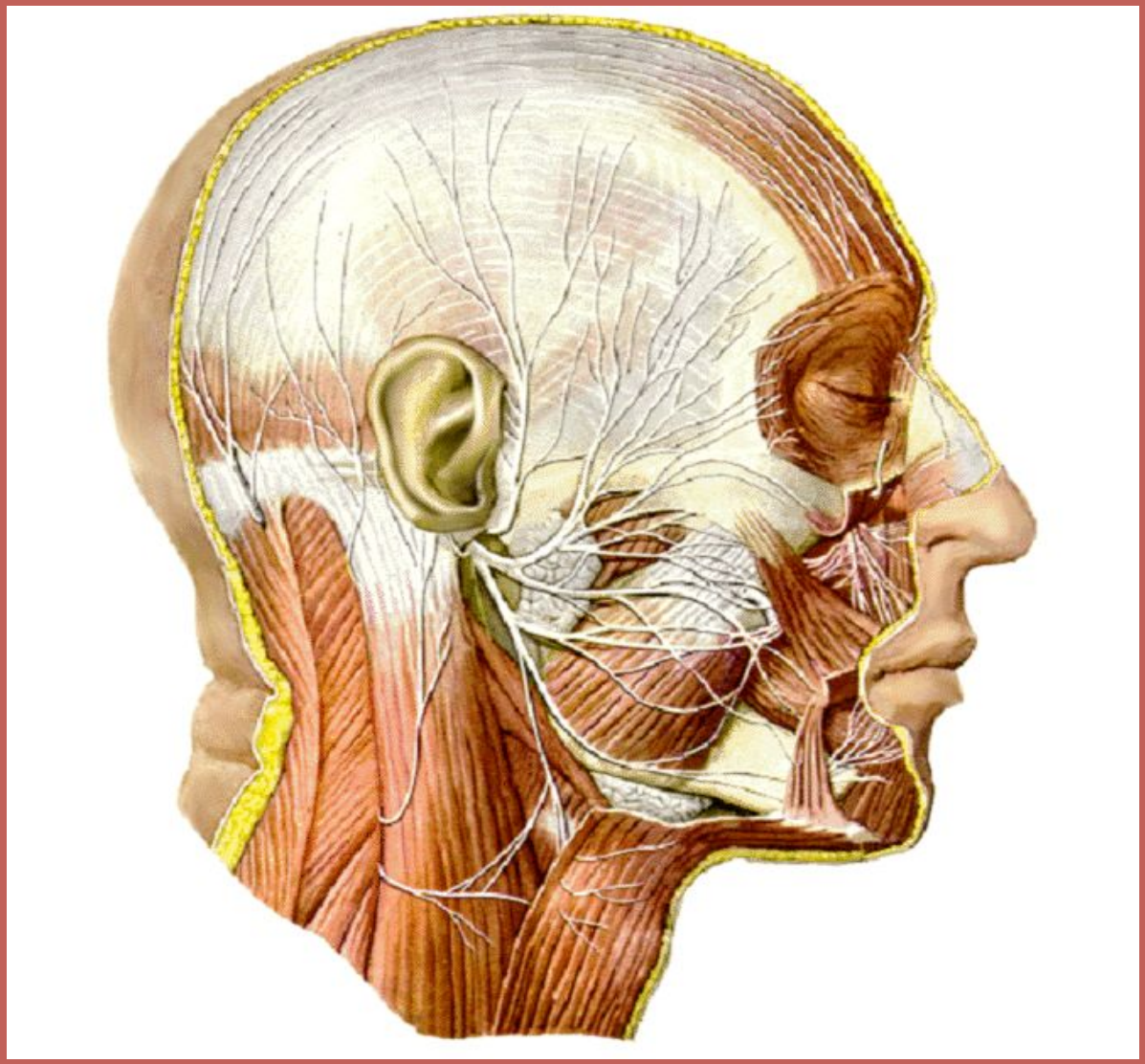


The venous drainage of the Scalp

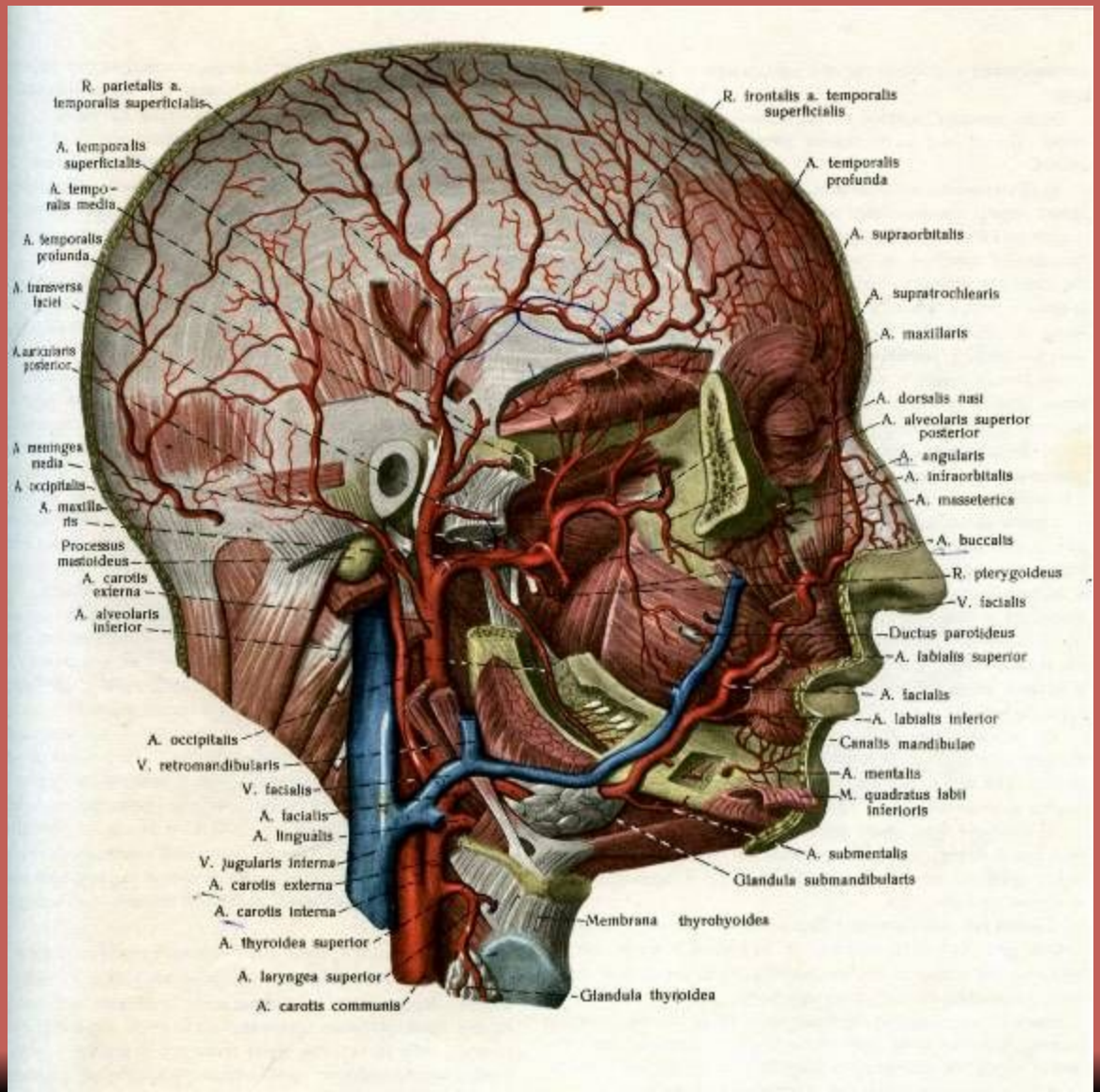
- The supratrochlear and supraorbital veins (to from the facial vein).
- The superficial temporal vein (to from the retromandibular vein).
- The postrior auricular vein (to from the external jugular vein).
- The occipital vein (into the suboccipital venous plexus, in turn into the vertebral veins, occasionally forward into the internal jugular vein.
- The veins of the Scalp freely anastomose with another and are connected to the diploic veins and the intracranial venous sinuses by the valveless emissary veins.



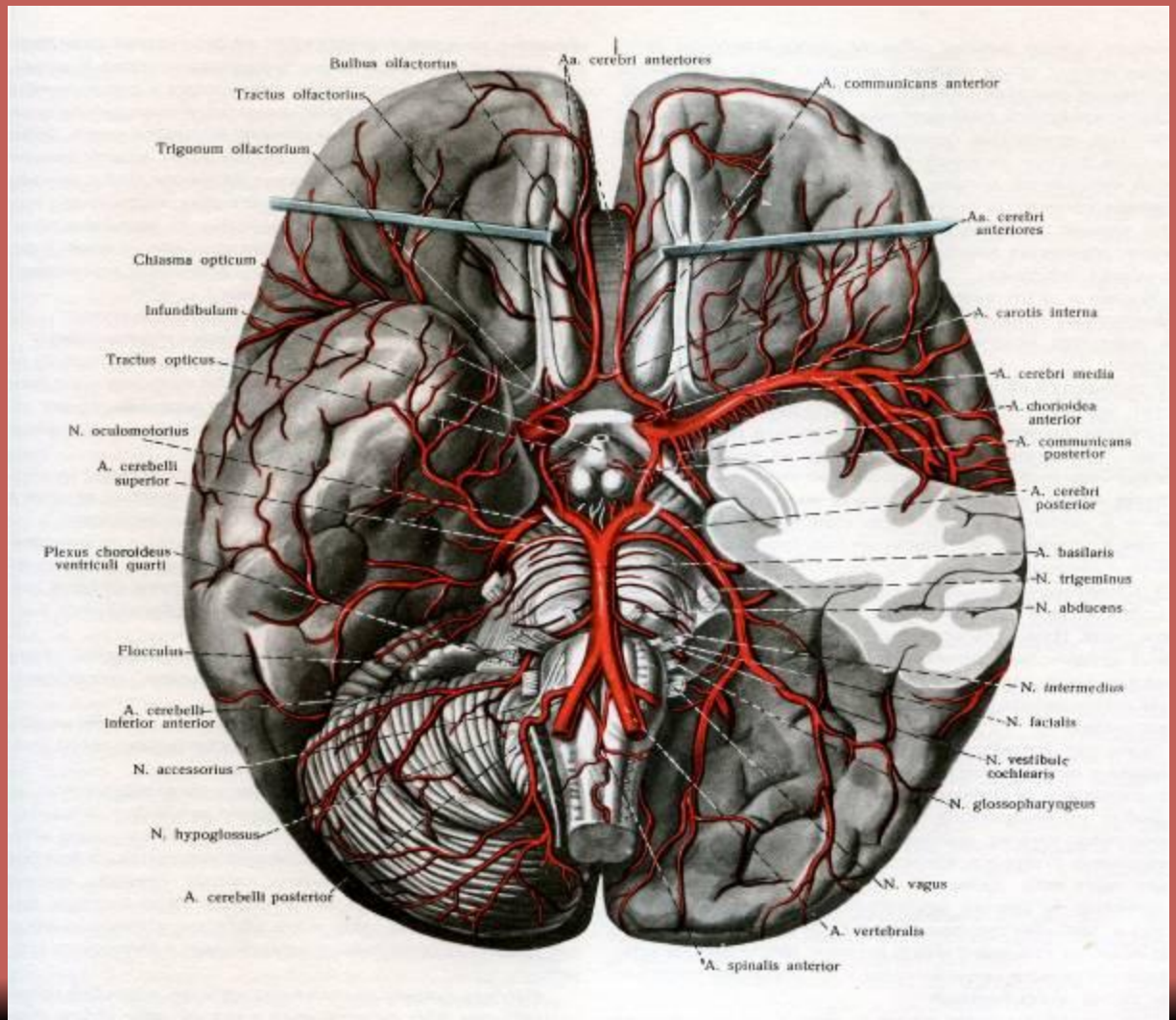
Temporal region and parotid regions



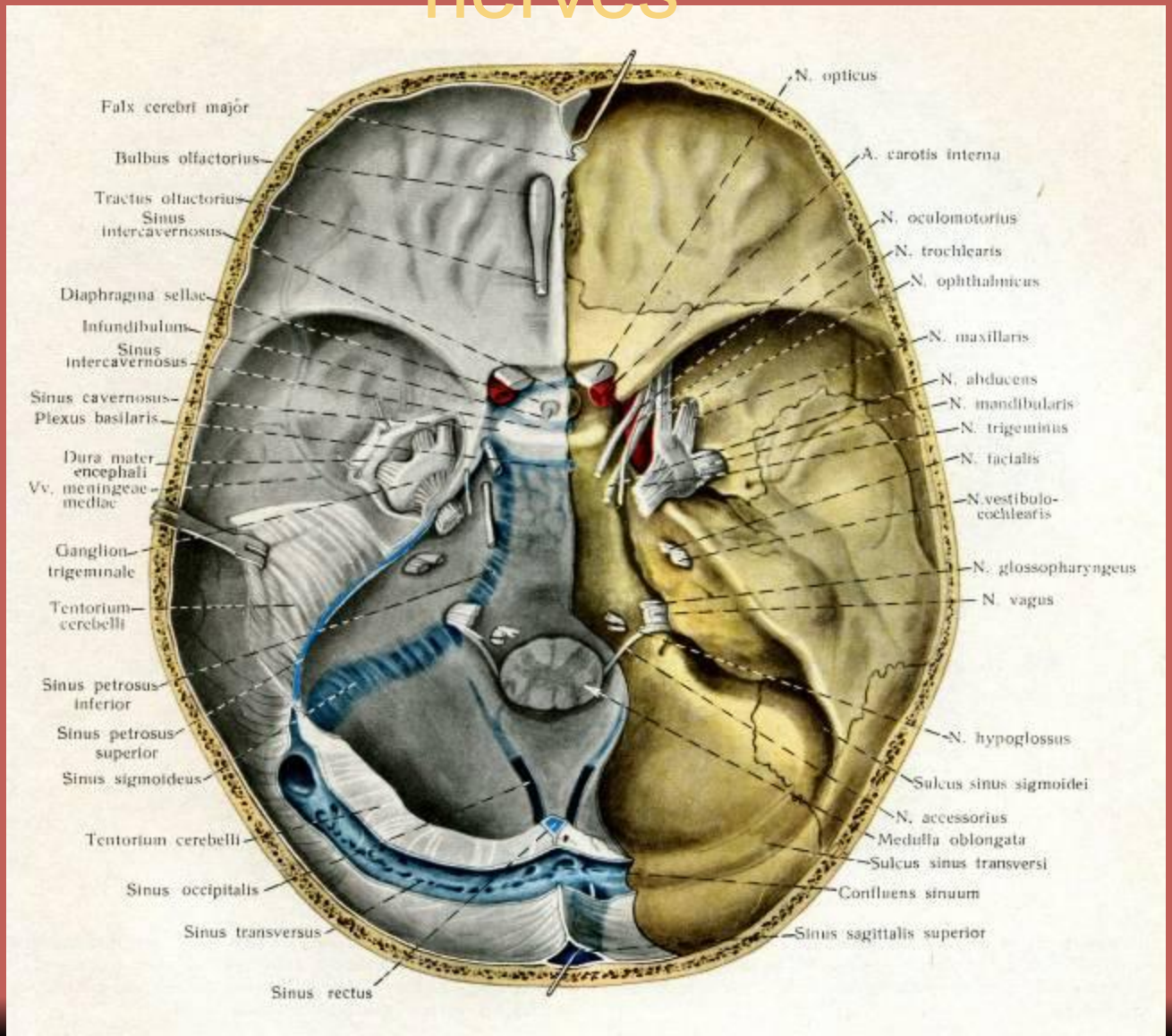
The temporal and infratemporal fossae, deep region of the face



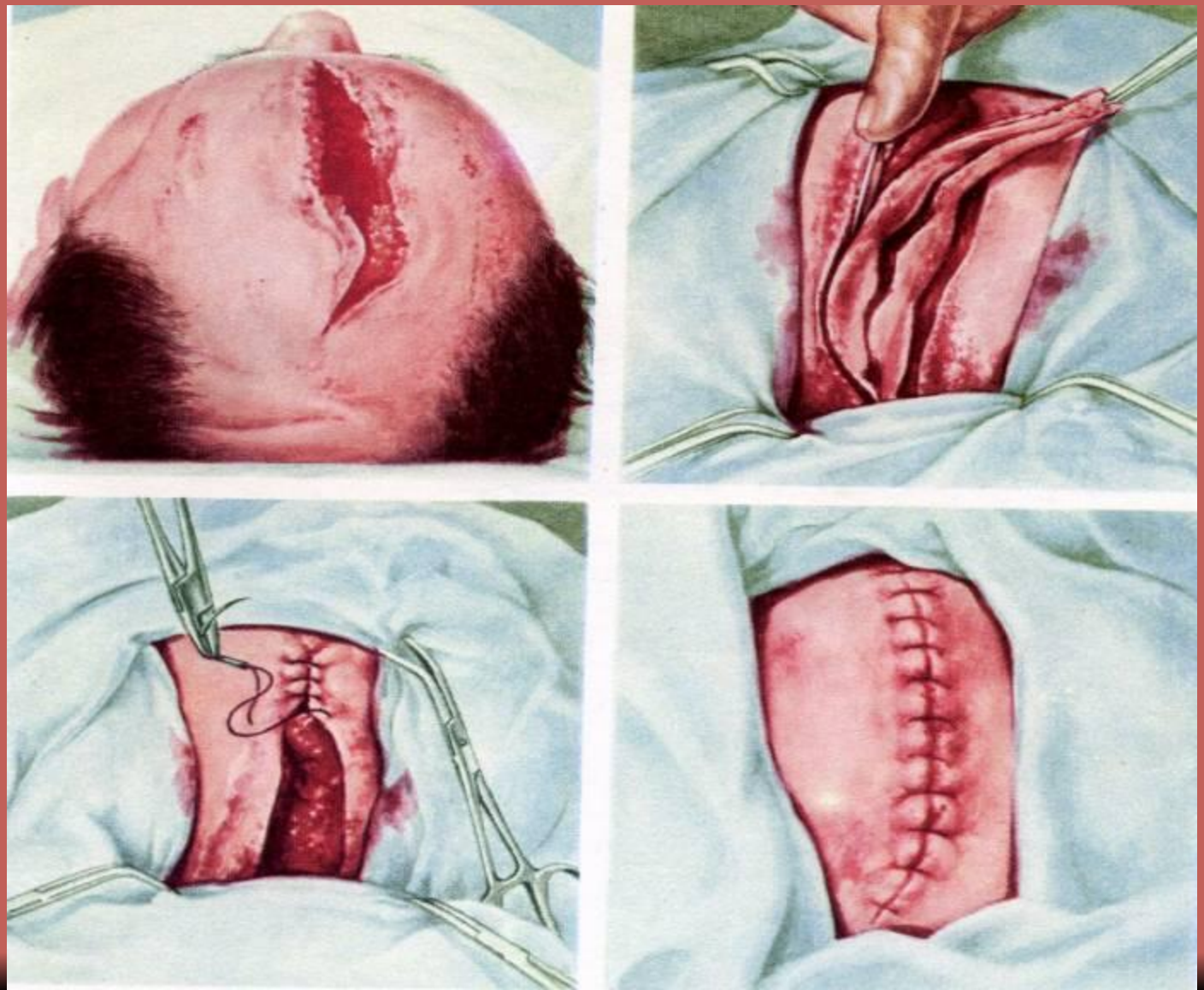
The four arteries anastomose on the inferior surface of the brain and form the *circulus arteriosus*



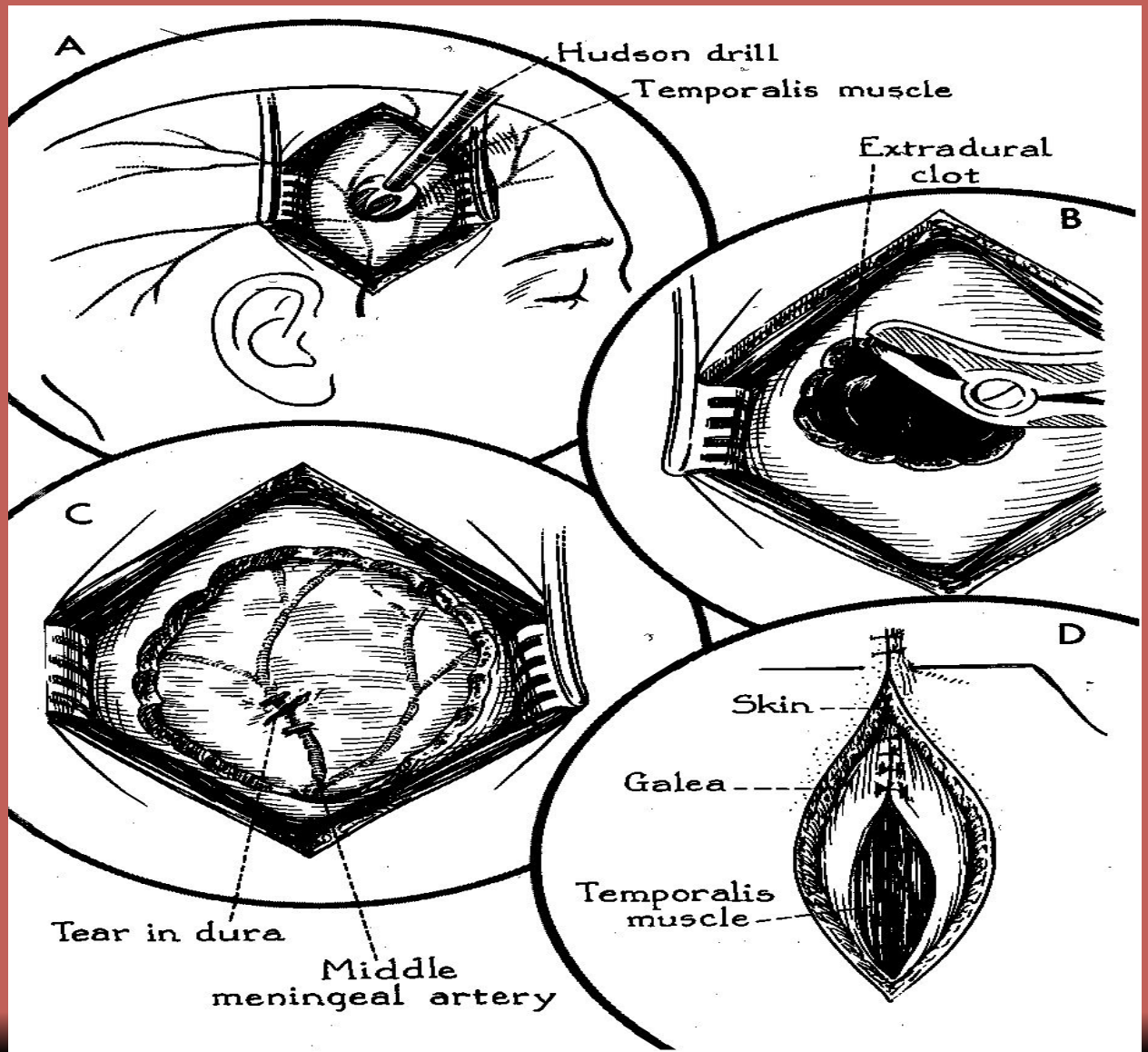
Internal base the skull,dura mater,venous sinuses and cranial nerves

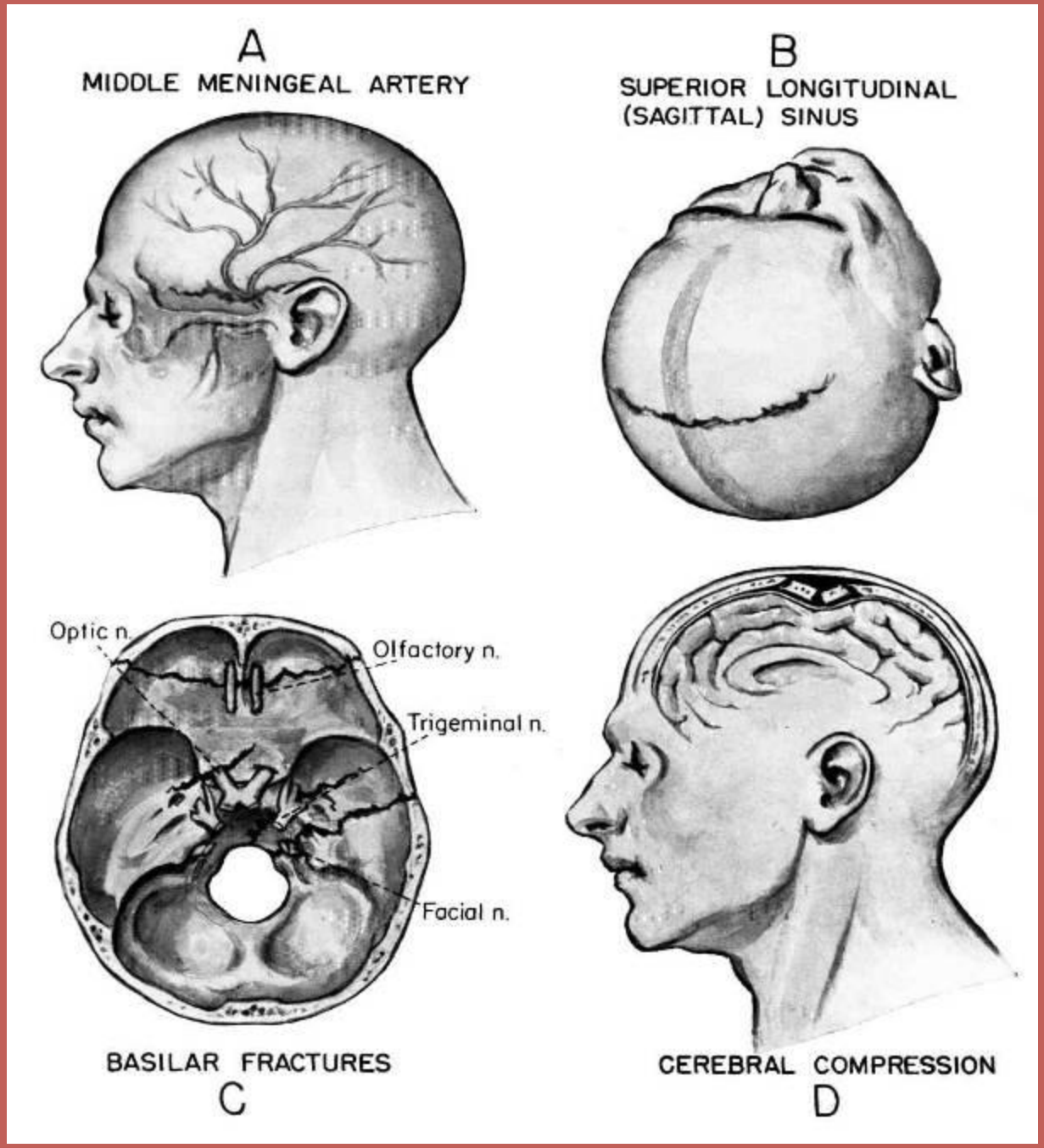


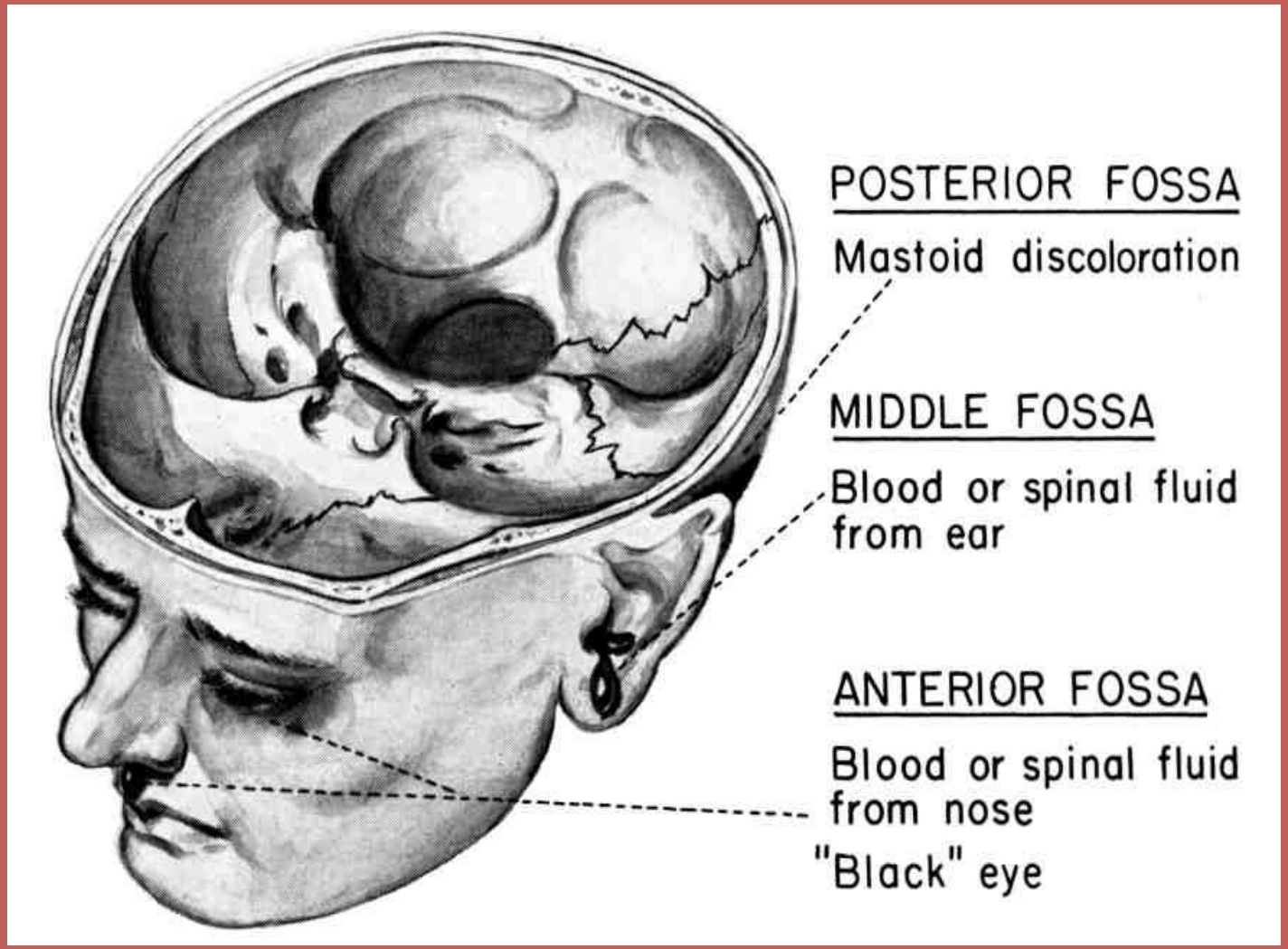
Scalp wound debridment



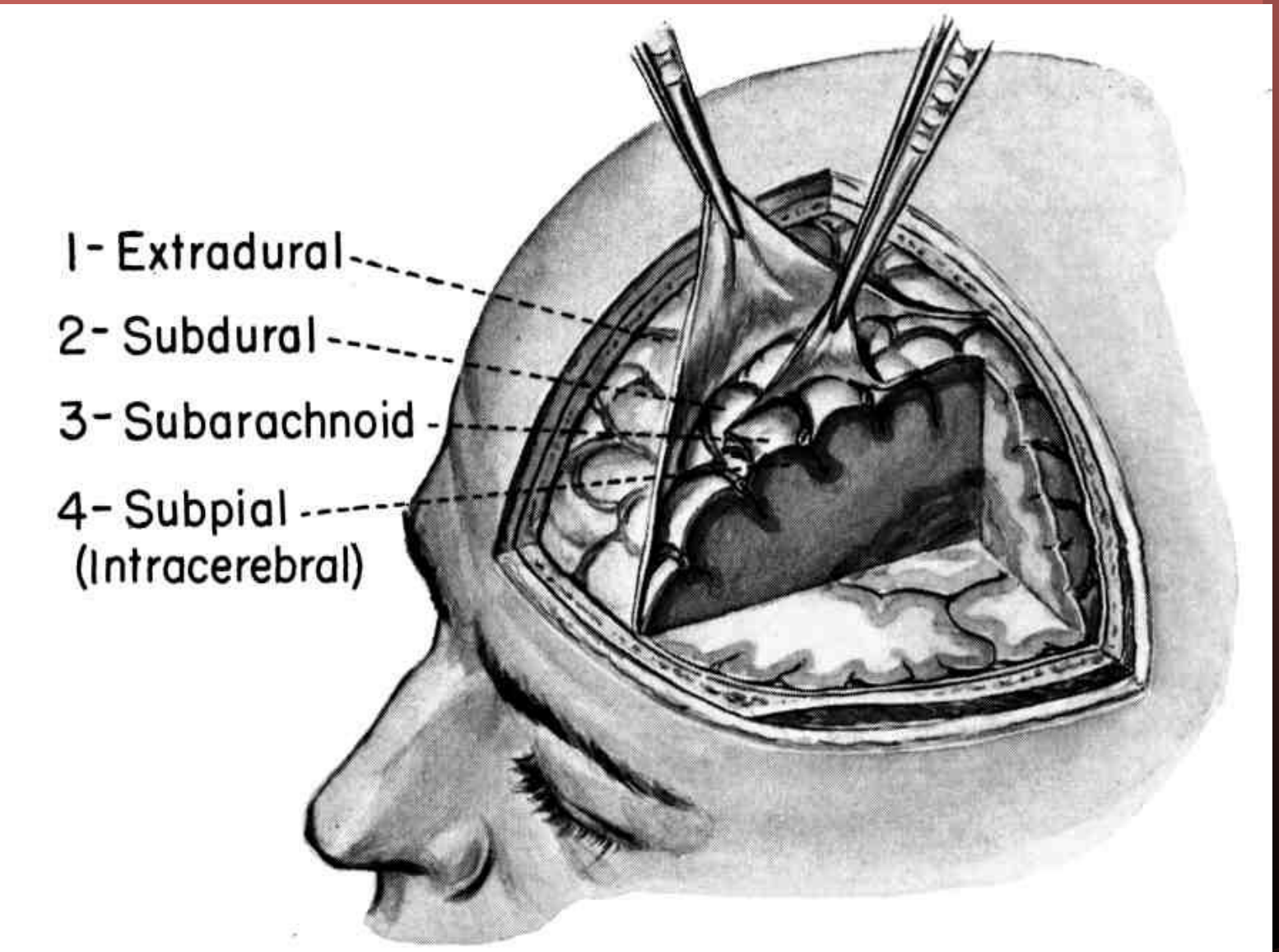
Decompression trepanation

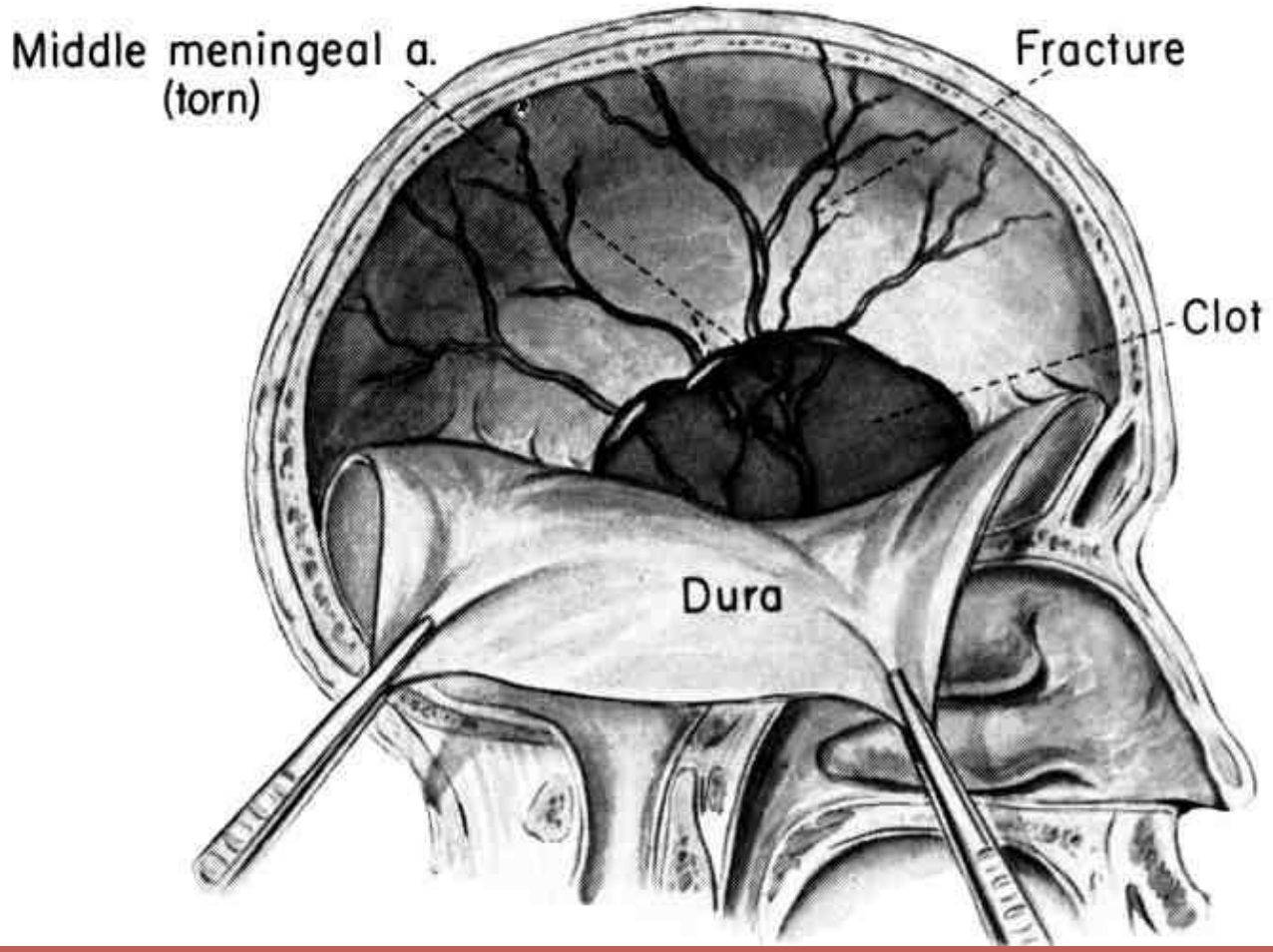


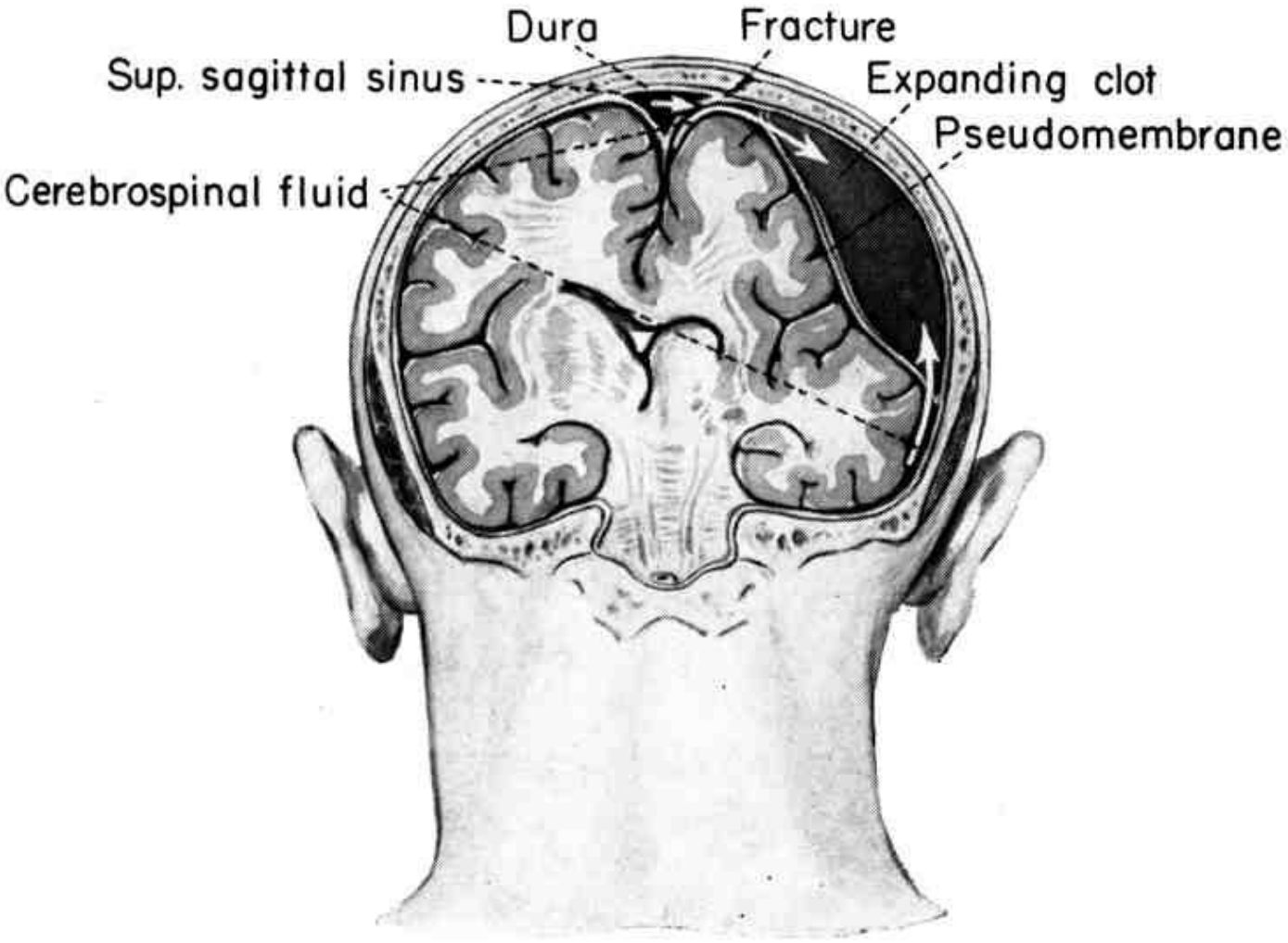

A
MIDDLE MENINGEAL ARTERY
B
SUPERIOR LONGITUDINAL
(SAGITTAL) SINUS
Optic n.
Olfactory n.
Trigeminal n.
Facial n.
BASILAR FRACTURES
C
CEREBRAL COMPRESSION
D


POSTERIOR FOSSA
Mastoid discoloration
MIDDLE FOSSA
Blood or spinal fluid from ear
ANTERIOR FOSSA
Blood or spinal fluid from nose
"Black" eye

Potential places of intracranial hematoma




Middle meningeal a.
(torn)
Fracture
Clot
Dura


Dura
Fracture
Sup. sagittal sinus
Expanding clot
Pseudomembrane
Cerebrospinal fluid

Thank You for Attention!