

Anatomical and Physiological Substantiations of the Operative Interventions on the Head

Associate-professor Slaby

O.B.



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

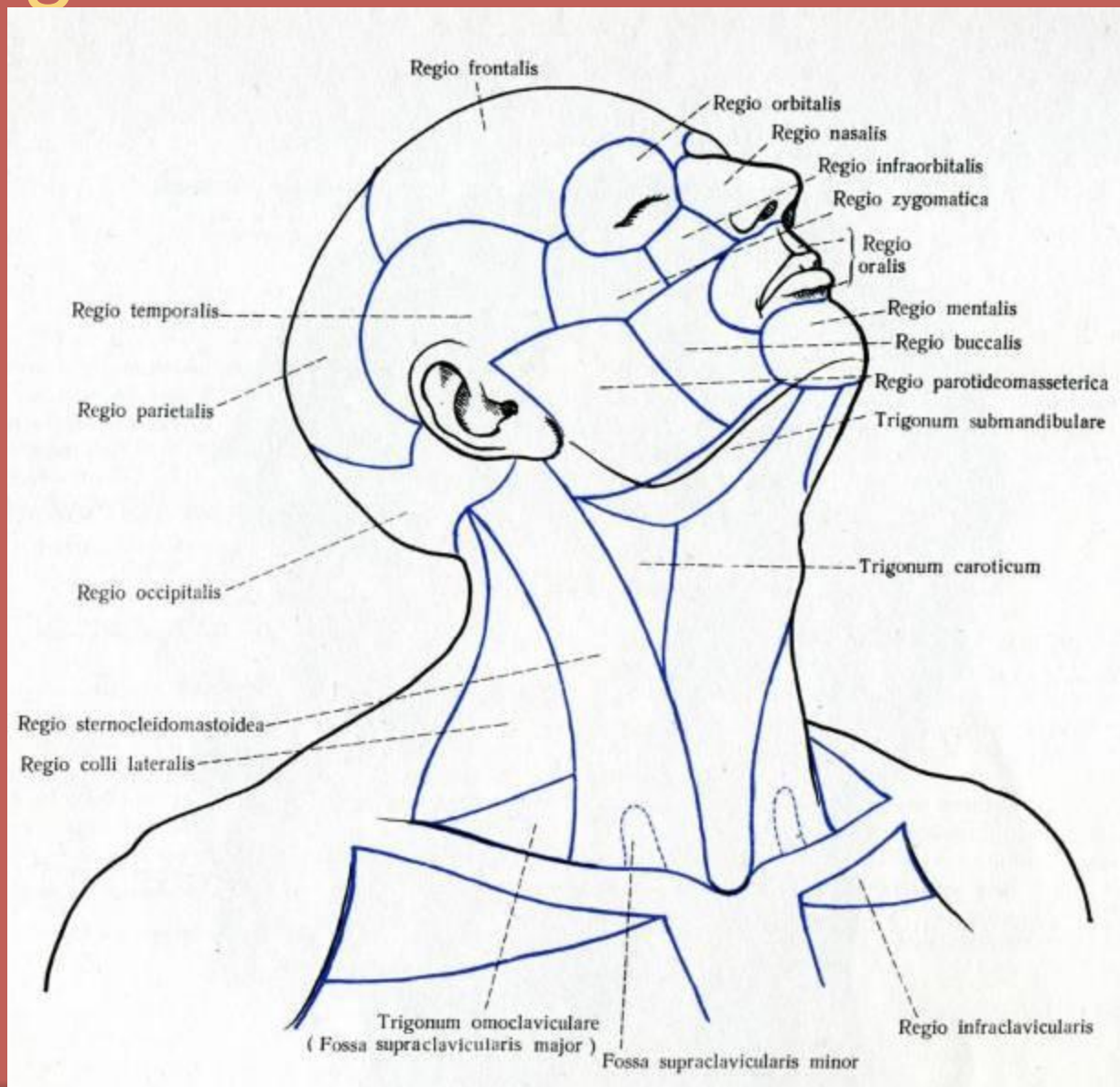


Type of sutures

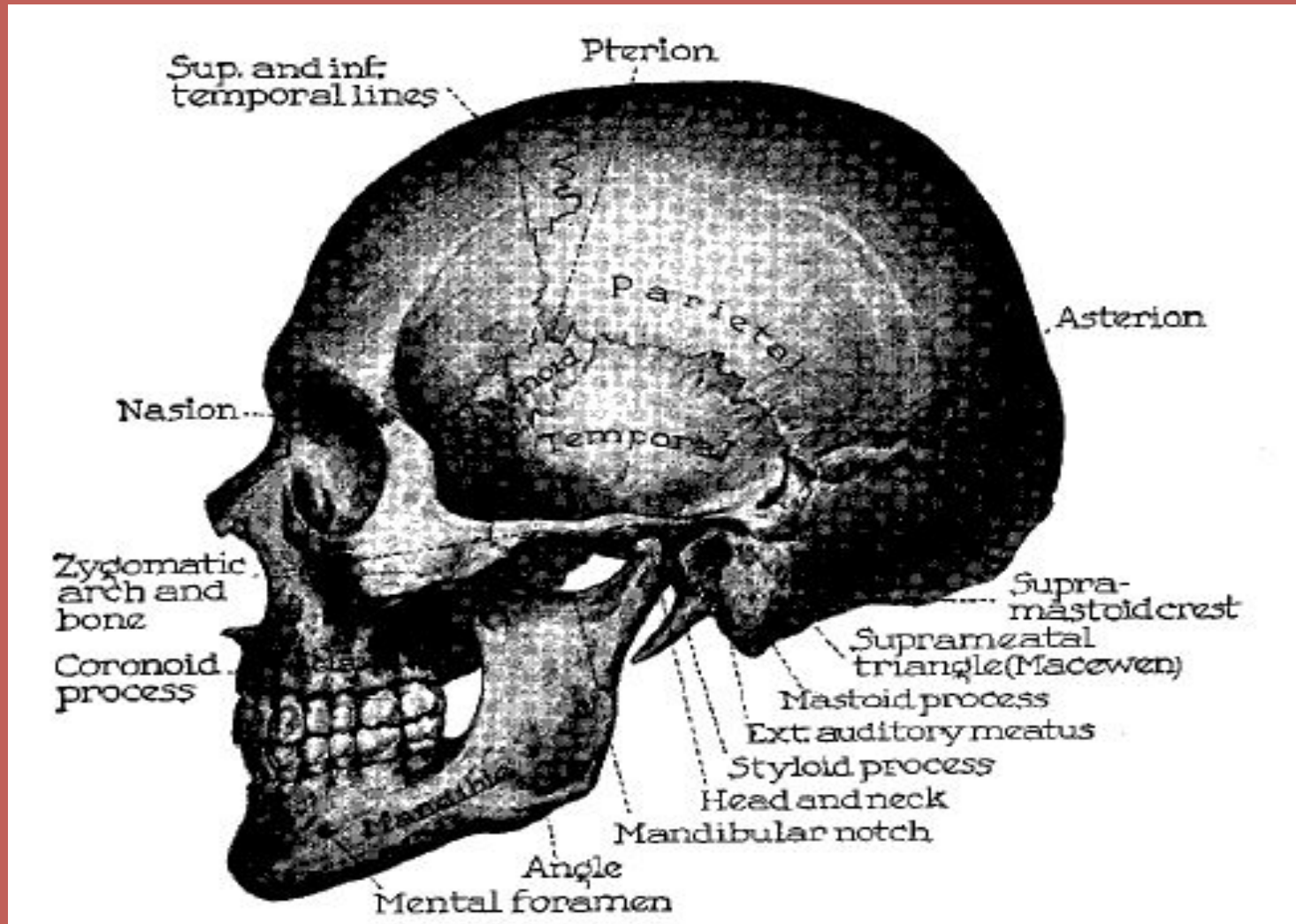
- Interrupted
- Continuous



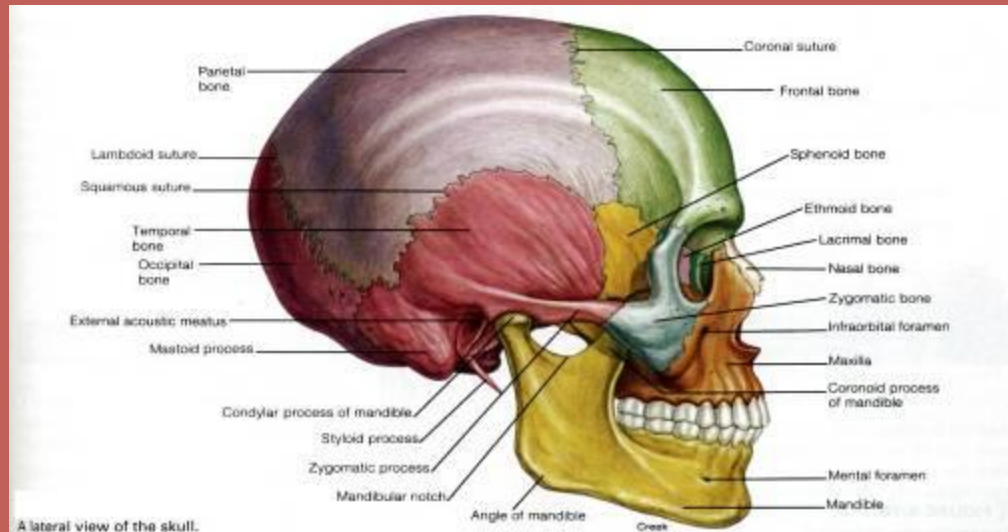
Regions of the Head and Neck



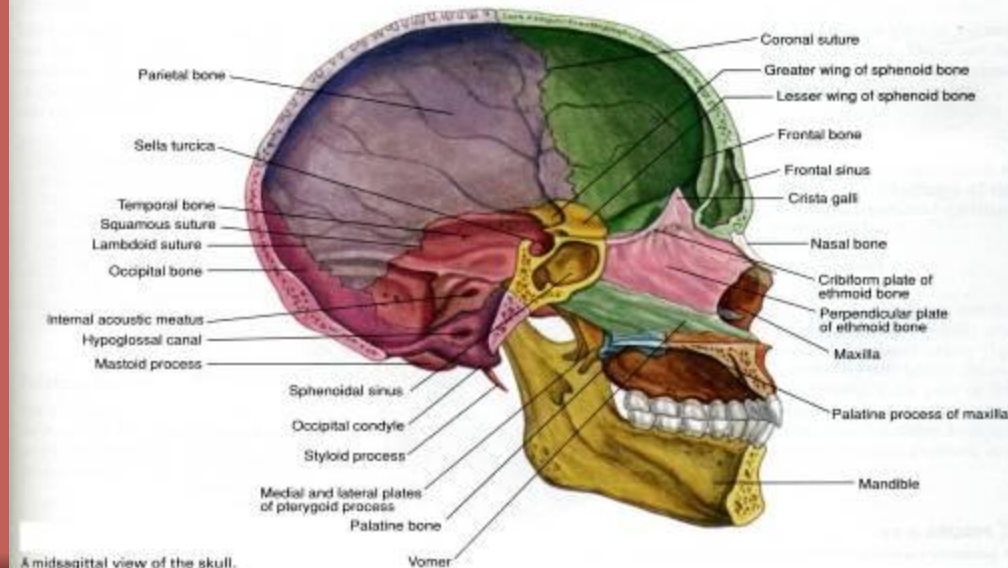
Side view of the skull (norma lateralis).



A Lateral view of the Skull

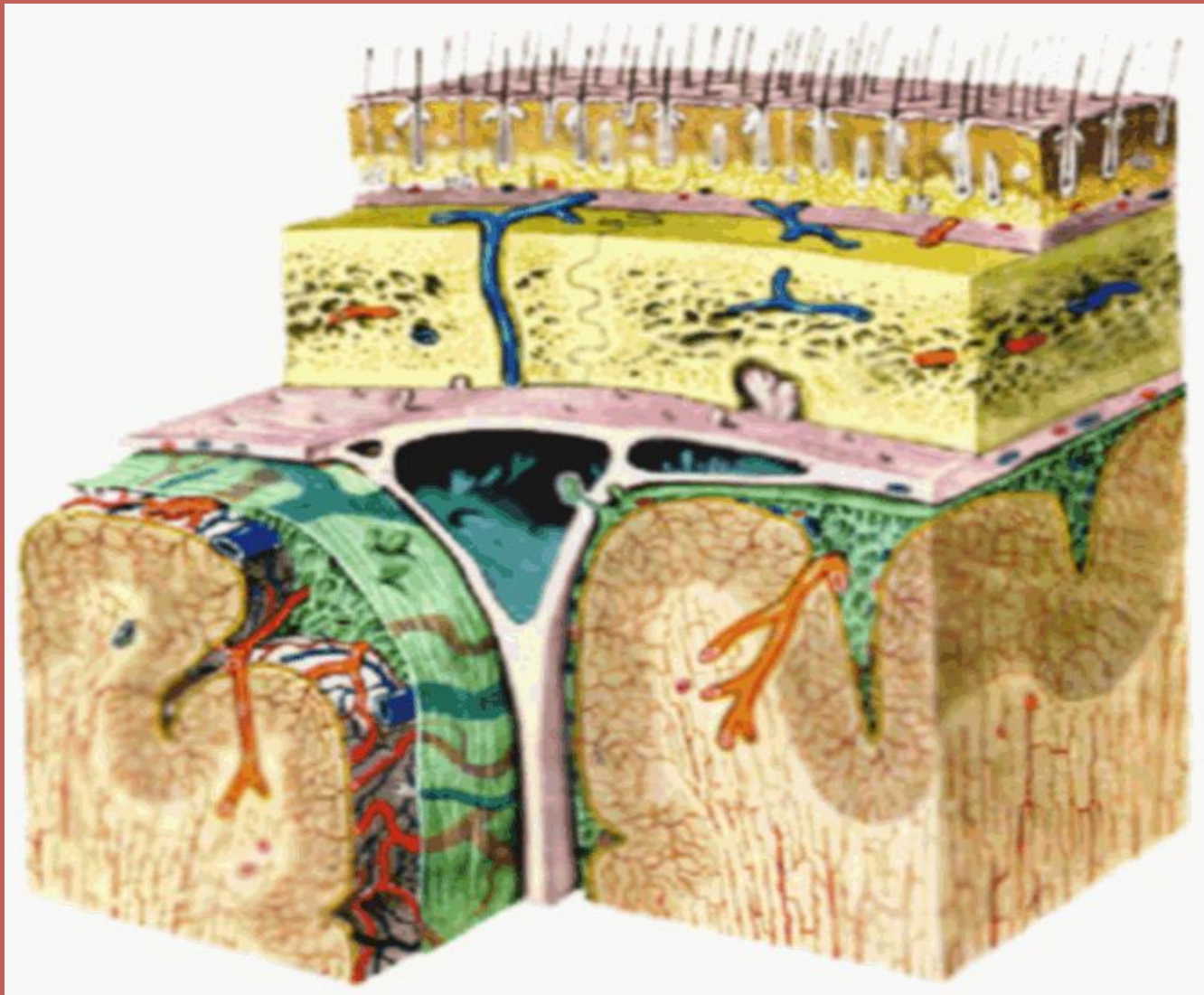


A lateral view of the skull.



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. galea 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

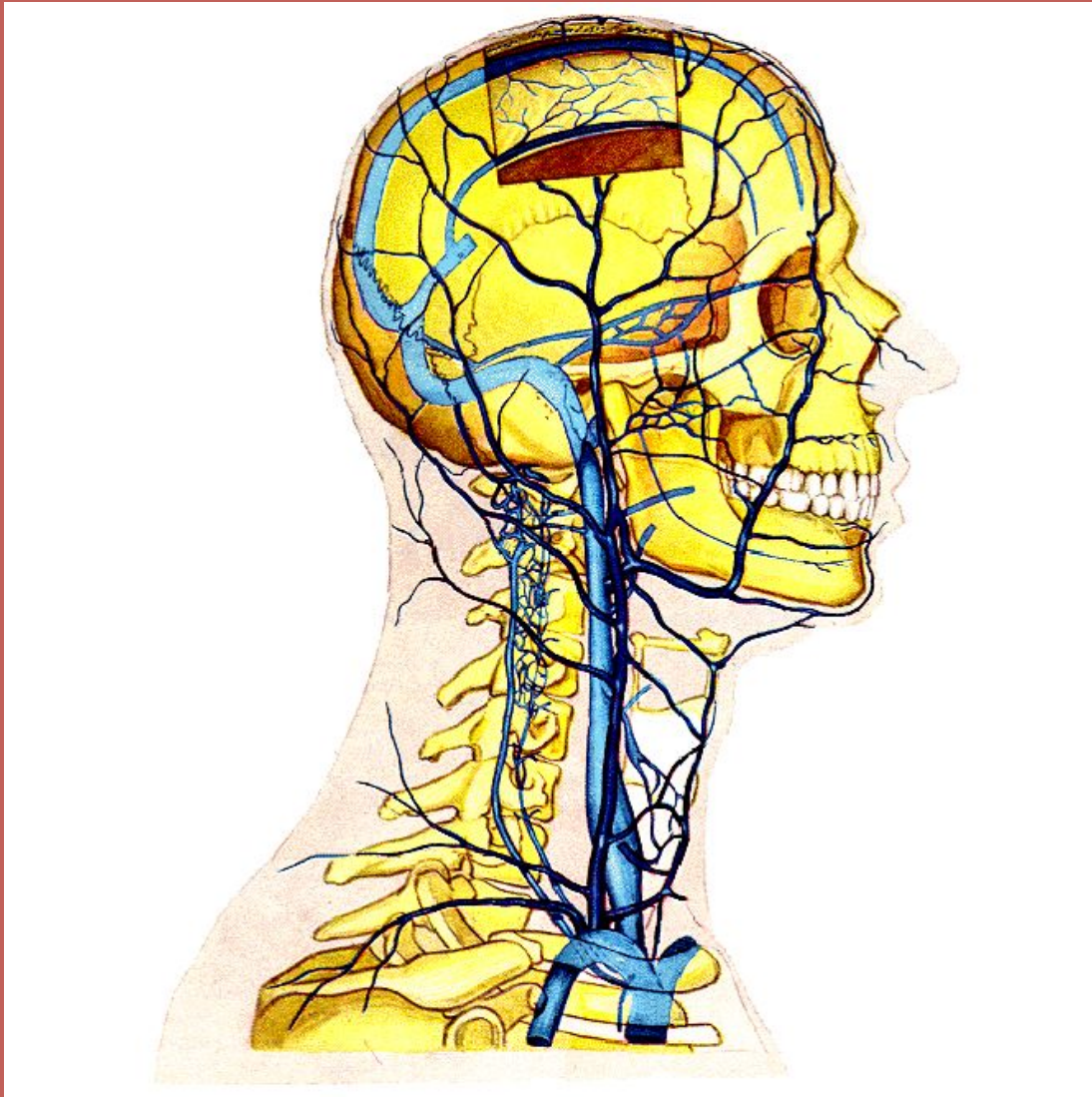


Arterial and nerve supply of the Scalp

- 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 occipital artery and greater occipital nerve (posterior ramus of the second cervical nerve).



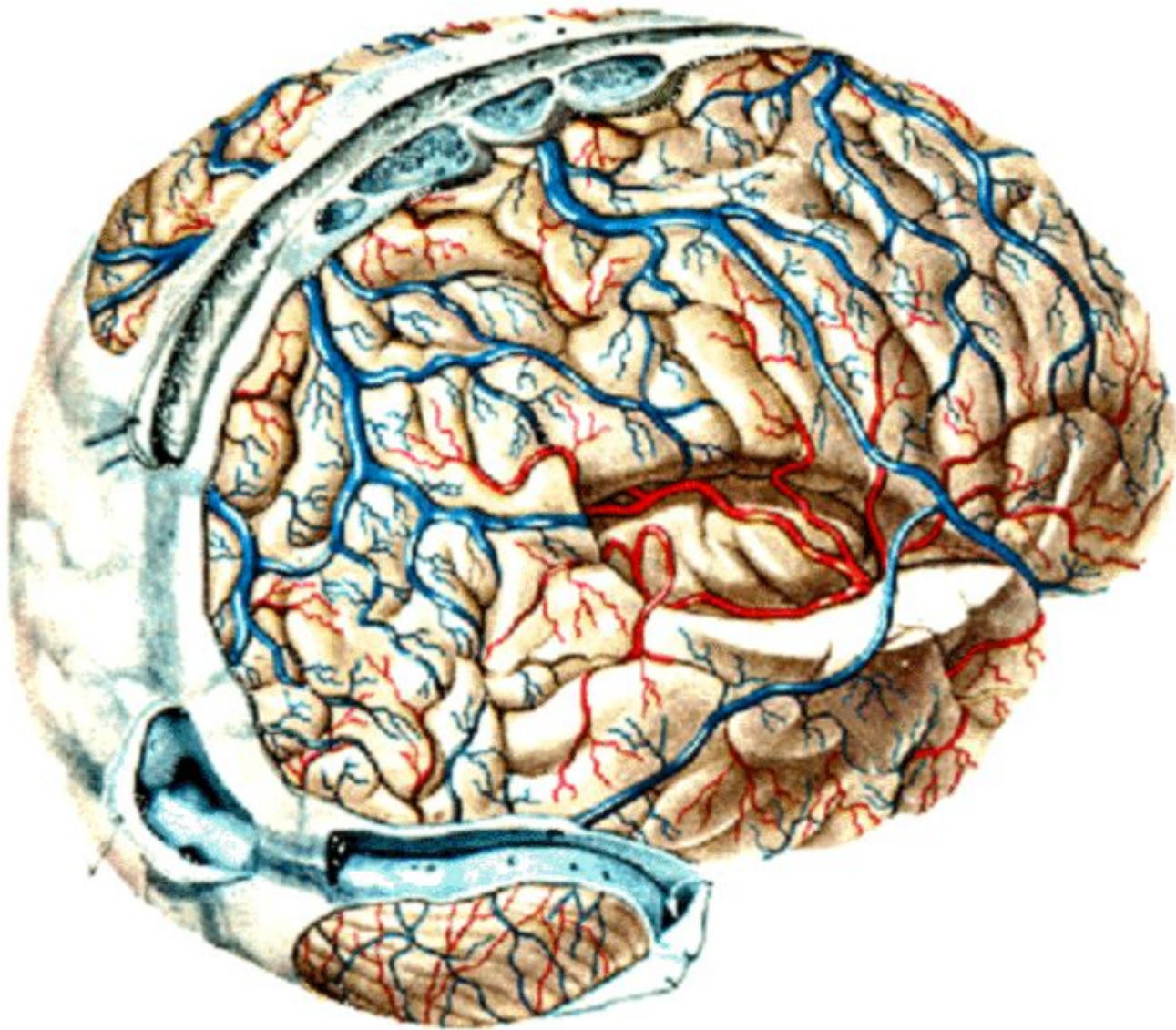
Head and Neck Veins



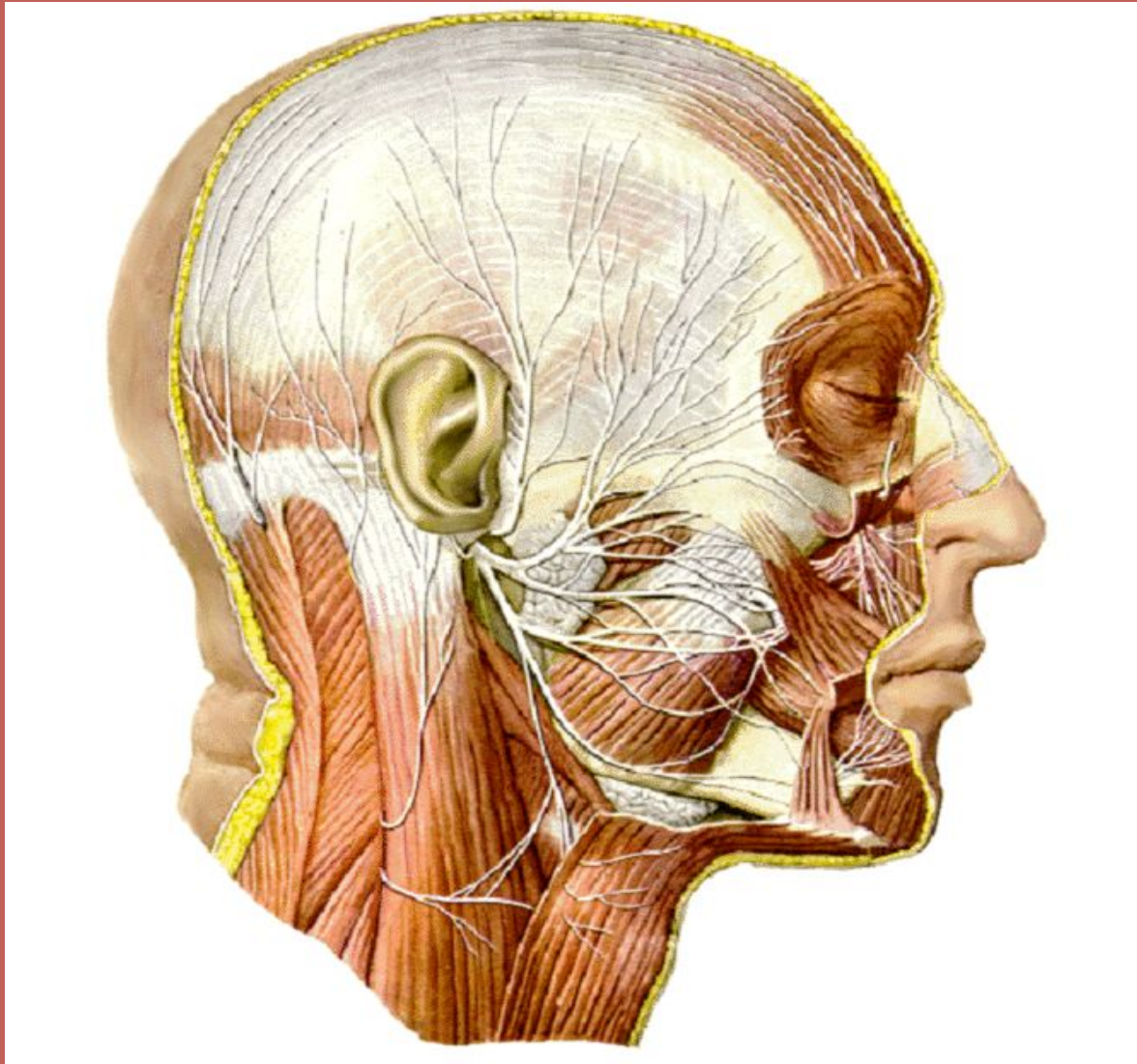
The venous drainage of the Scalp

- The supratrochlear and supraorbital veins (to from the facial vein).
- The superficial temporal vein (to from the retromandibular vein).
- The posterior 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.

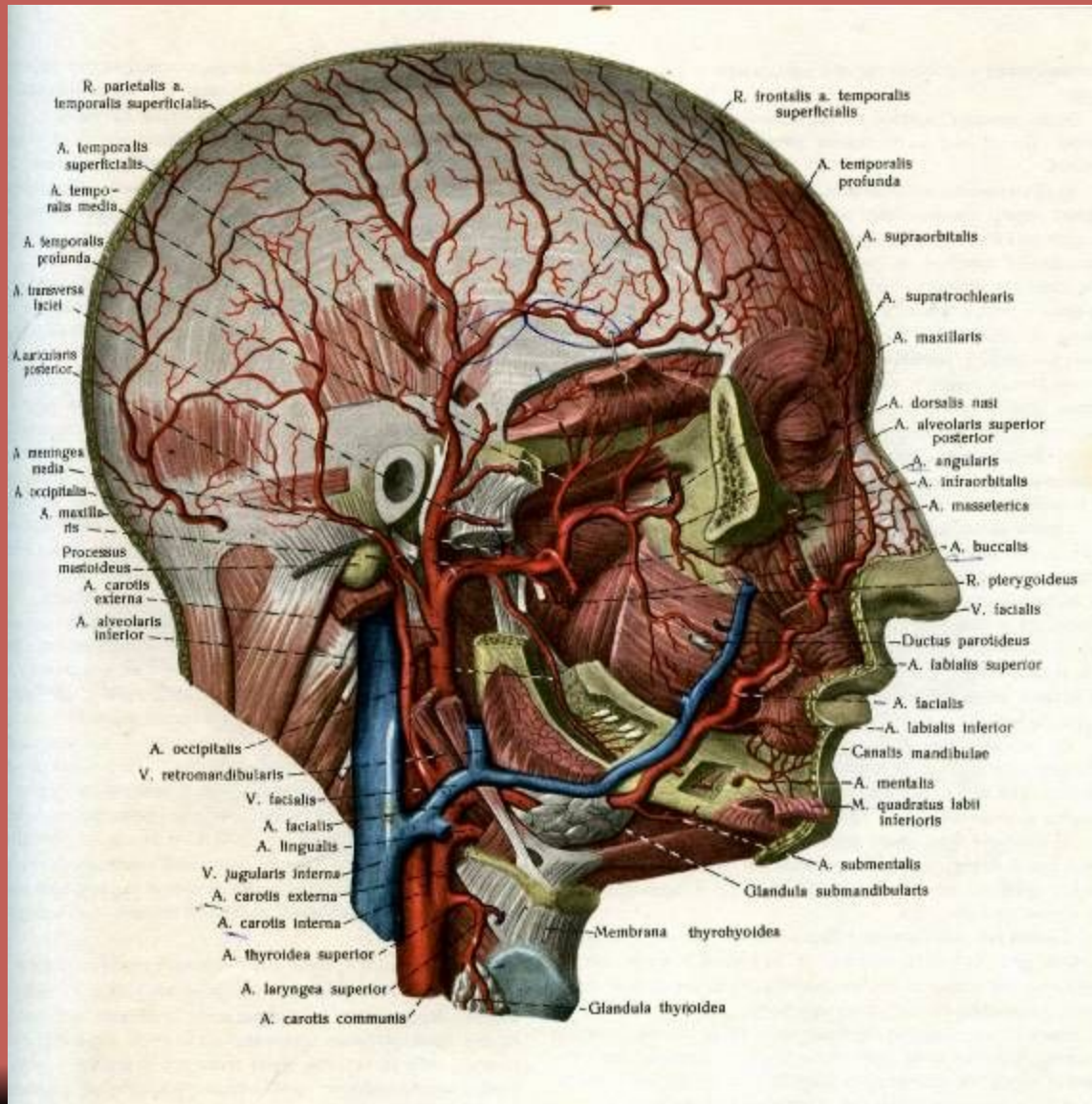




Temporal region and parotid regions

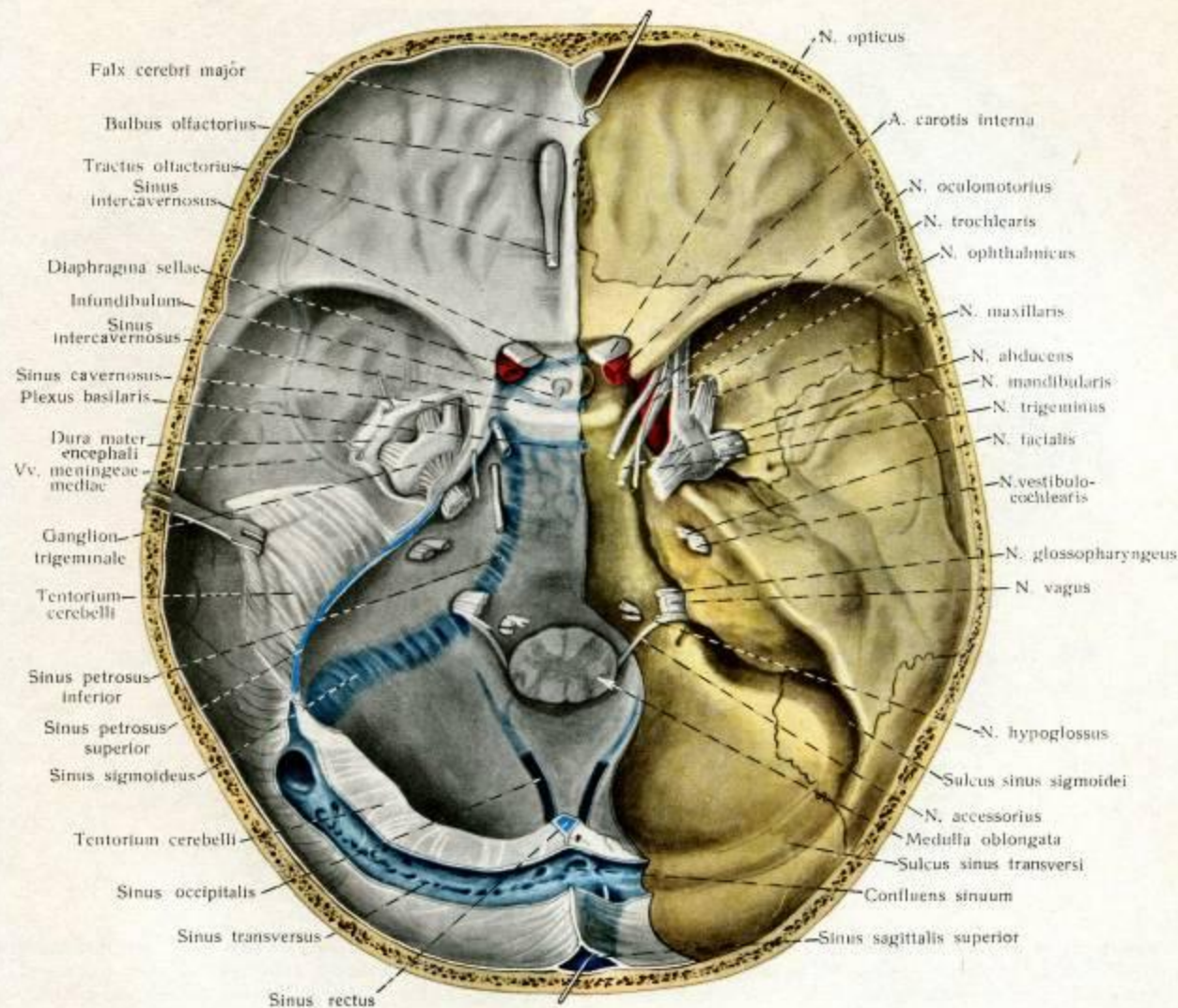


The temporal and infratemporal fossae, deep region of the face

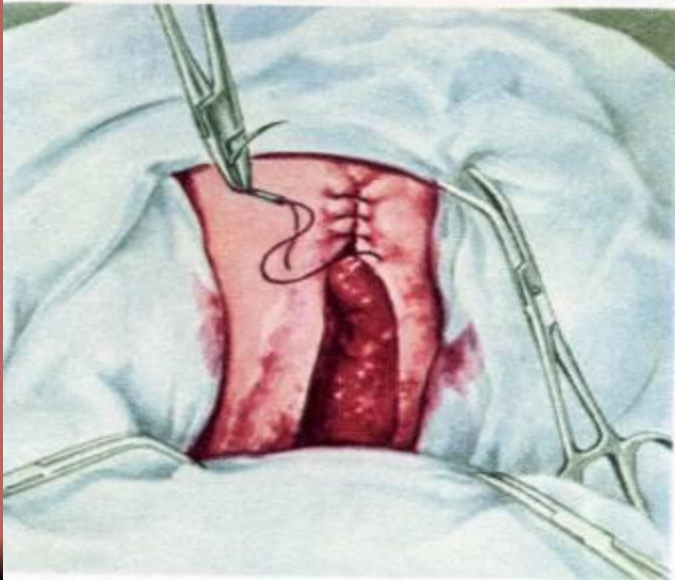




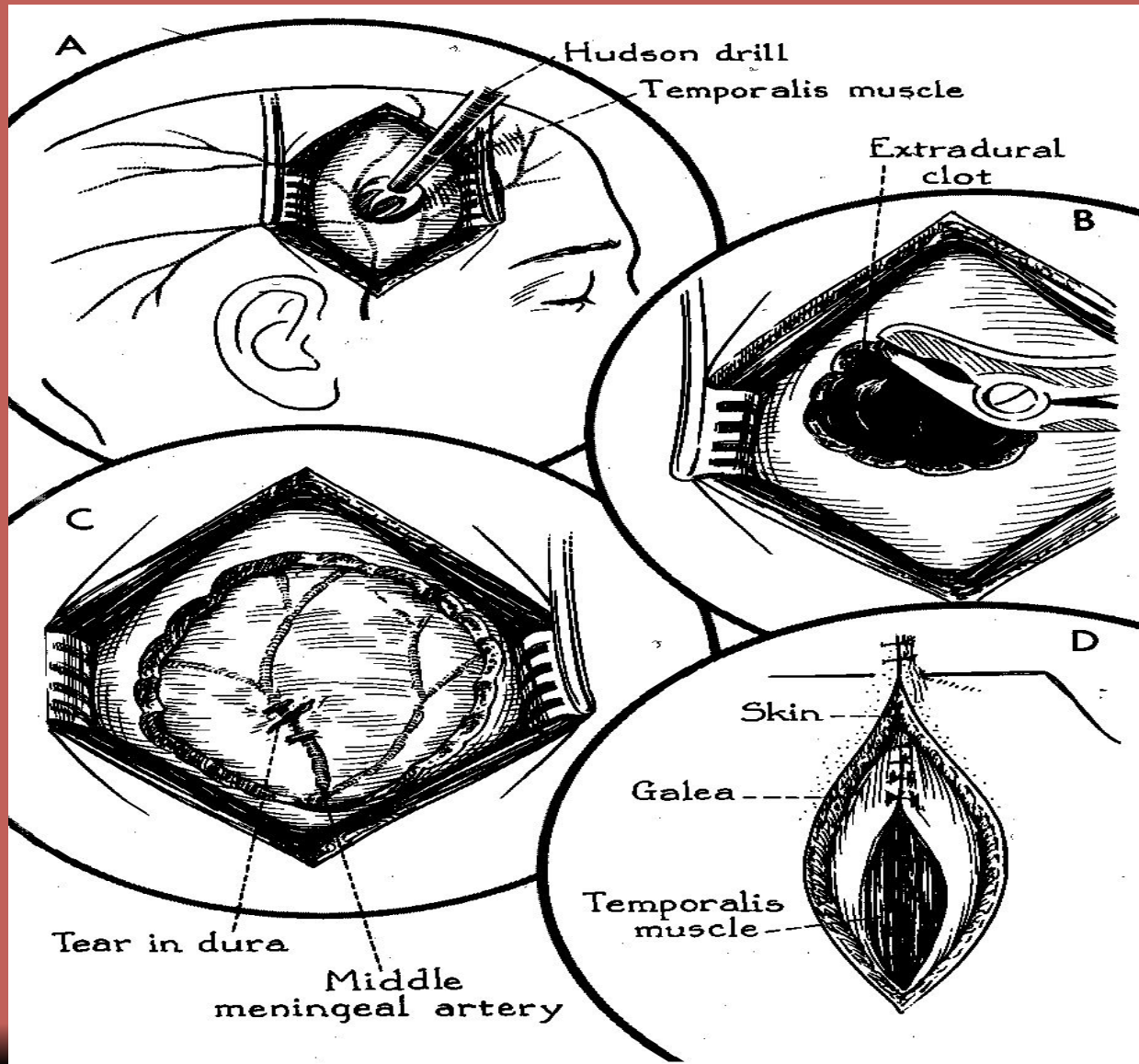
Internal base the skull, dura mater, venous sinuses and cranial nerves



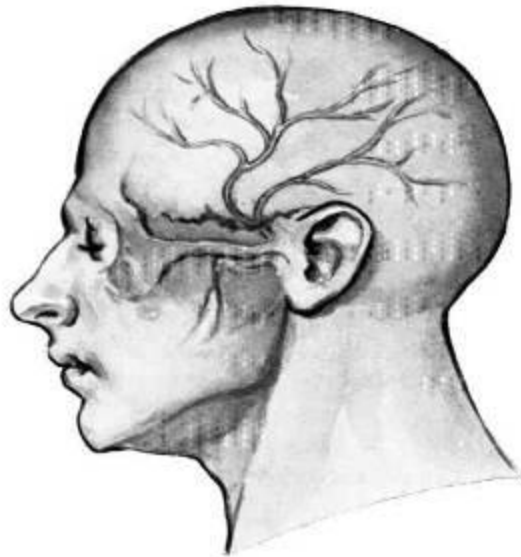
Scalp wound debridement



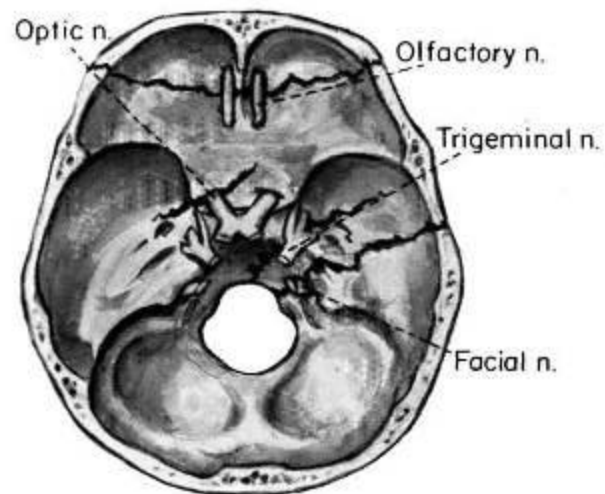
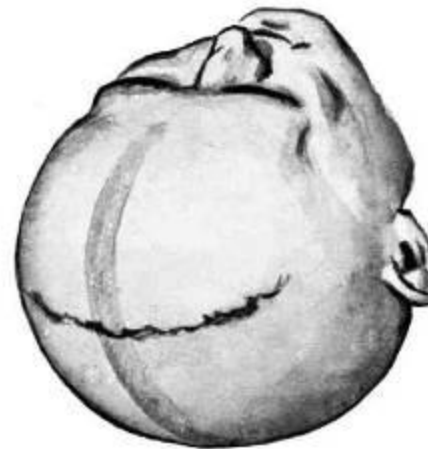
Decompression trepanation



A
MIDDLE MENINGEAL ARTERY



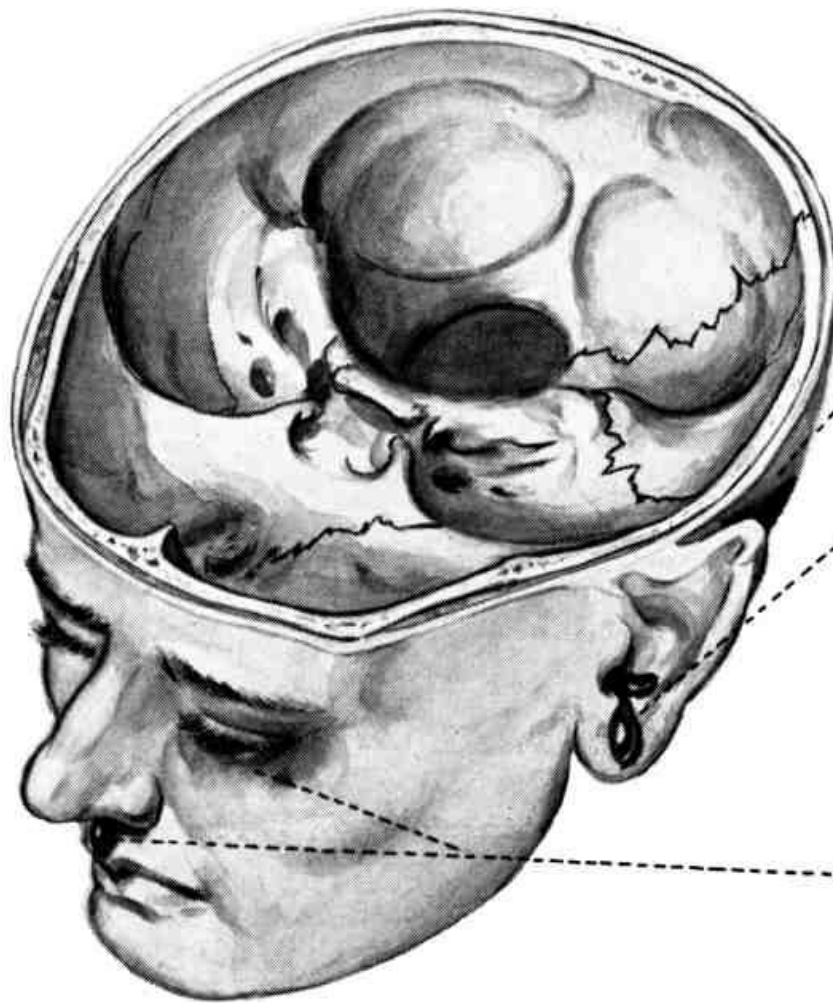
B
SUPERIOR LONGITUDINAL
(SAGITTAL) SINUS



C
BASILAR FRACTURES



D
CEREBRAL COMPRESSION



POSTERIOR FOSSA

Mastoid discoloration

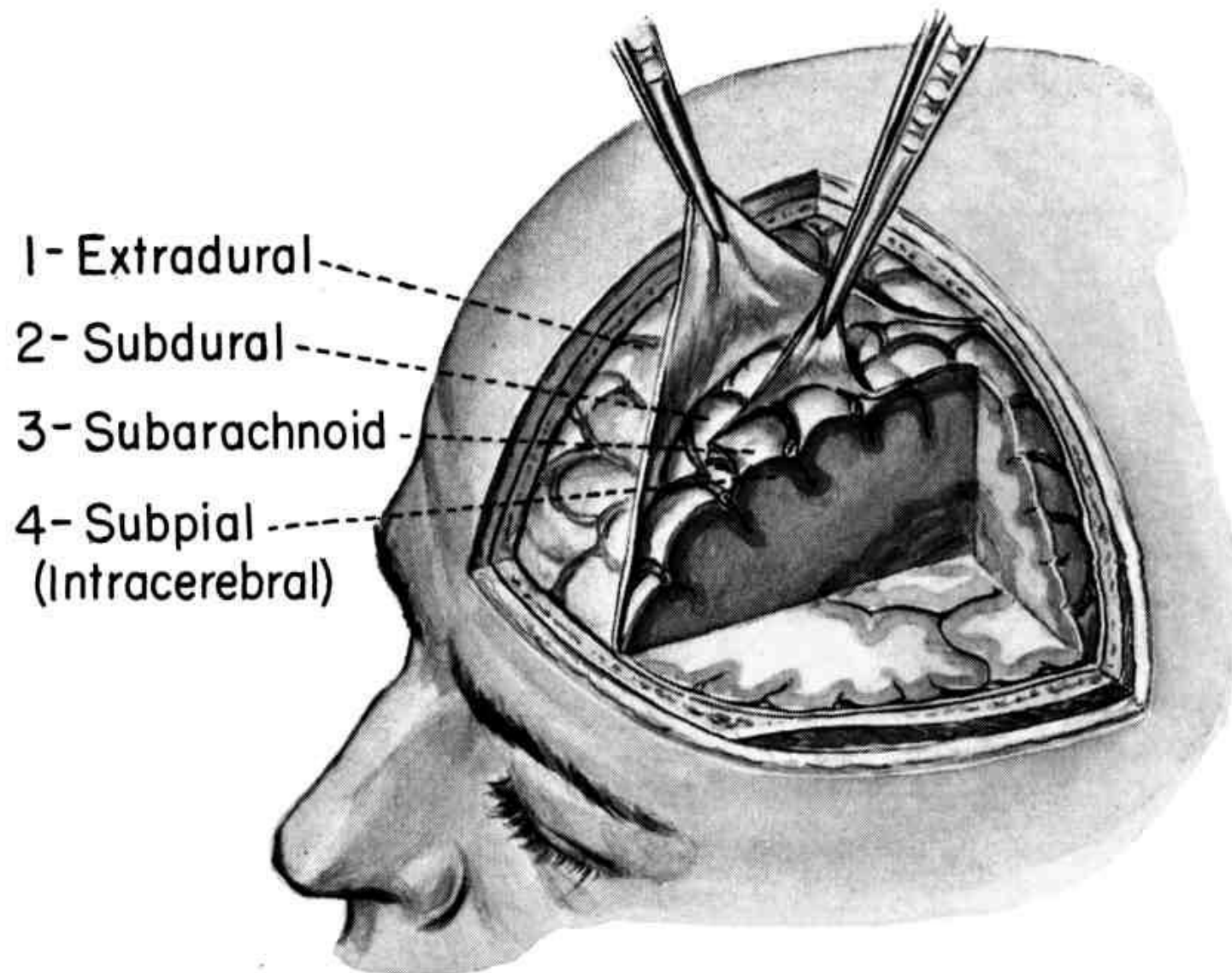
MIDDLE FOSSA

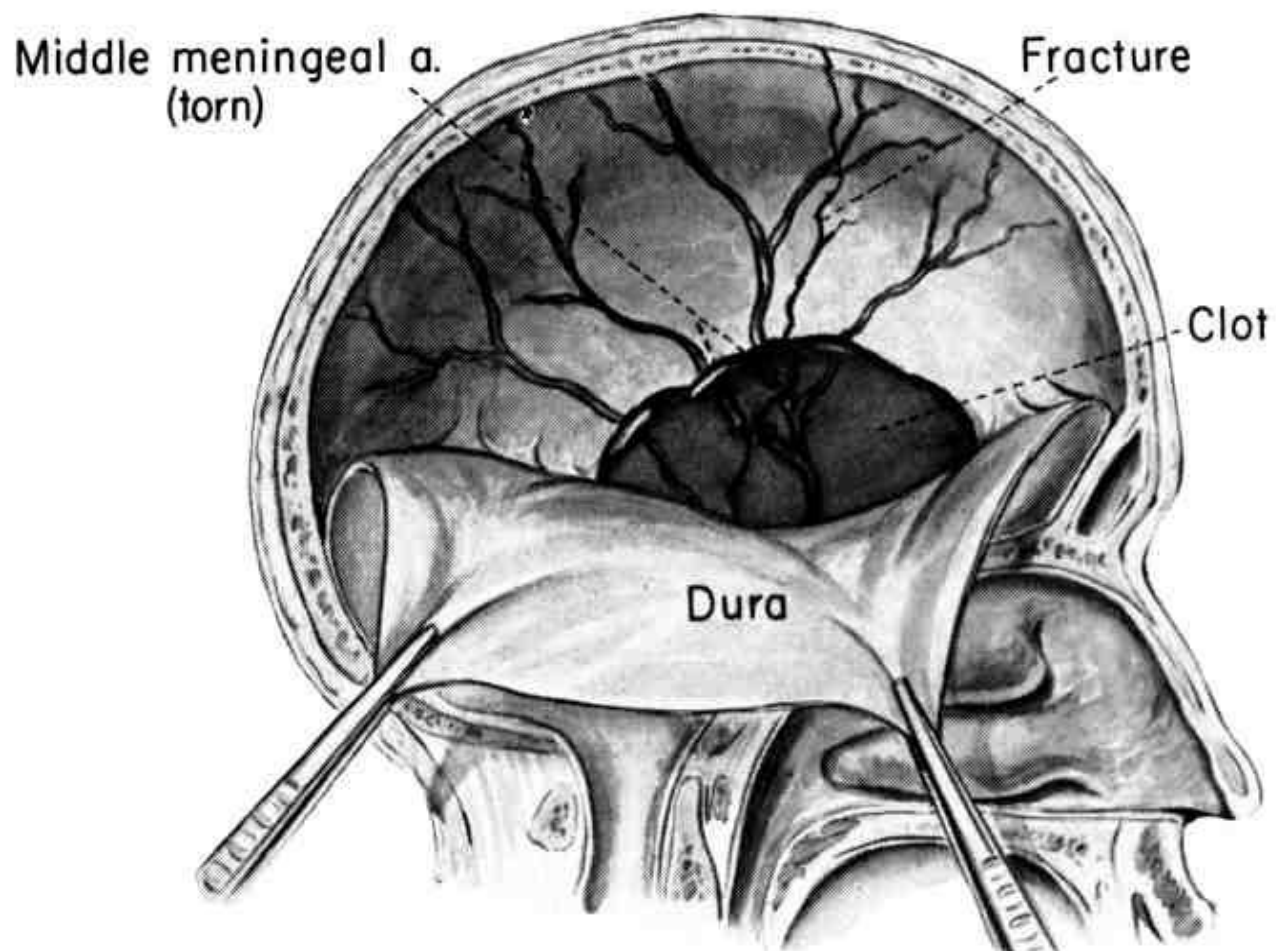
Blood or spinal fluid
from ear

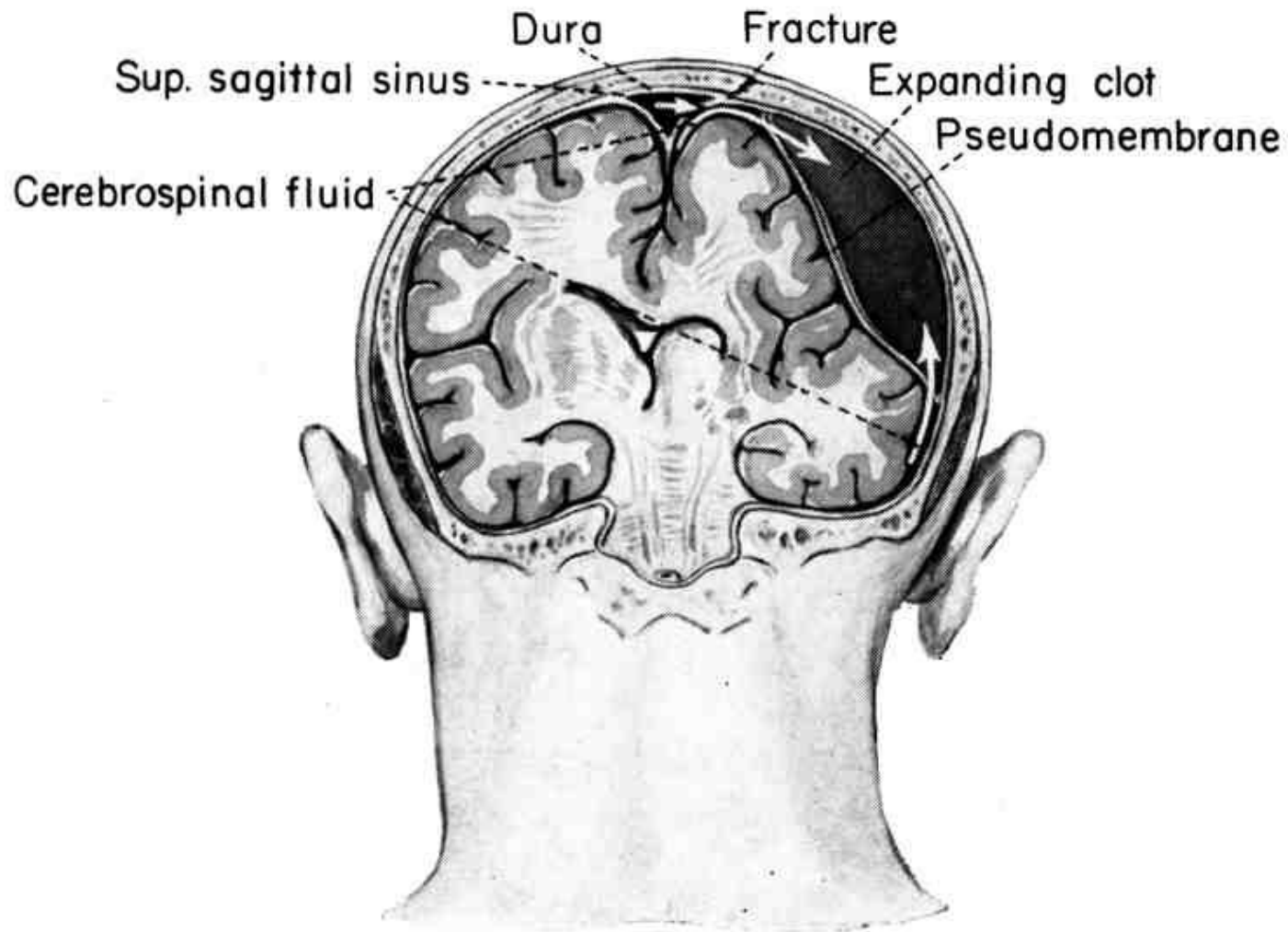
ANTERIOR FOSSA

Blood or spinal fluid
from nose
"Black" eye

Potential places of intracranial hematoma







Thank You for Attention!

