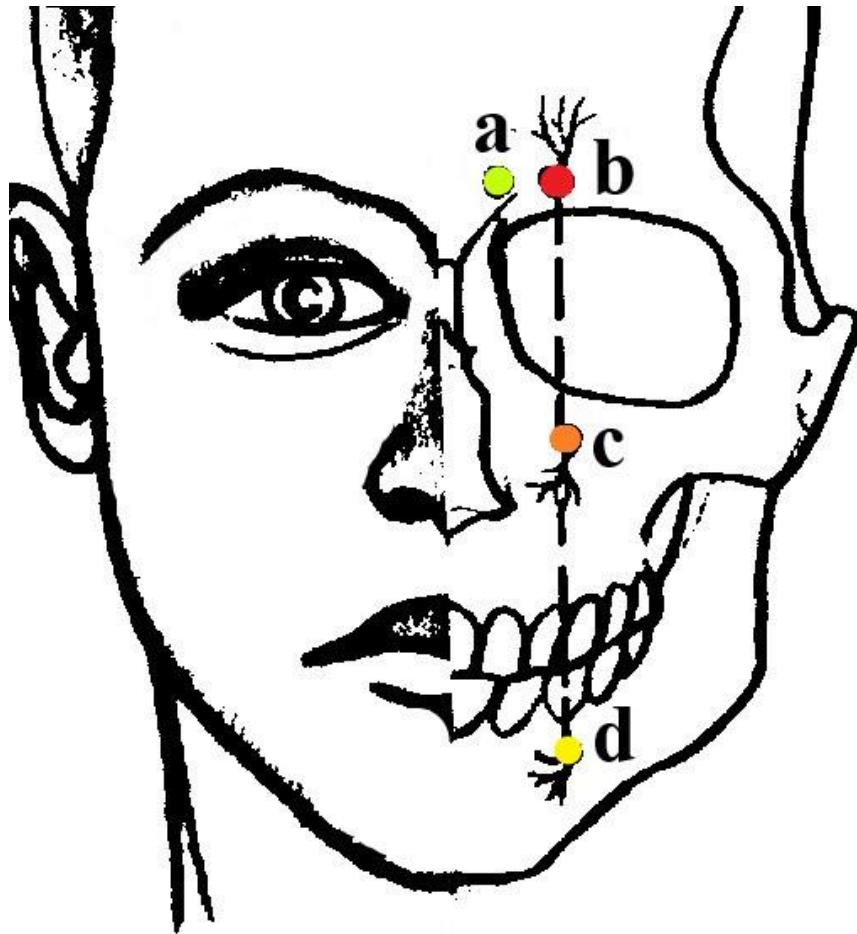


PROJECTIONS OF NEUROVASCULAR FASCICLES OF HEAD AND NECK

BRAIN DEPARTMENT

Supraorbital neurovascular fascicle (*a., v., n. supraorbitalis*) – exit projects at the upper orbital margin, corresponding to the midpoint between medial and middle thirds (fig.1, b).



*Figure 1 – The projections of neurovascular fascicles: a – frontal;
b – supraorbital; c – infraorbital; d – mental*

Frontal neurovascular fascicle (*a., v., n. frontalis*) – exit point corresponds to crossing of upper orbital margin with vertical line which goes through medial angle of the orbit (fig.1, a).

Superficial temporal vessels and auriculotemporal nerve project at the line going vertically 1cm to the front from external acoustic meatus (fig. 2, a).

Posterior auricular vessels and nerve (*a., v., n. auricularis posterior*) is projected at the line connecting the soft tissues of back part of the ear to temporal bone (fig.2, b).

Occipital artery (*a. occipitalis*) is projected onto occipital region in the middle of the line that connects external occipital prominence and back part of the base of mastoid process (fig.2, d).

Greater occipital nerve (*n. occipitalis major*) is projected at the level of the upper cervical line, at a distance of 2 cm outward from the median line and lies inside of the occipital artery (fig.2, e).

Lesser occipital nerve (*n. occipitalis minor*) is projected in the occipital region 3-3,5 cm posteriorly from the upper end of the root of the auricle (fig.2, c).

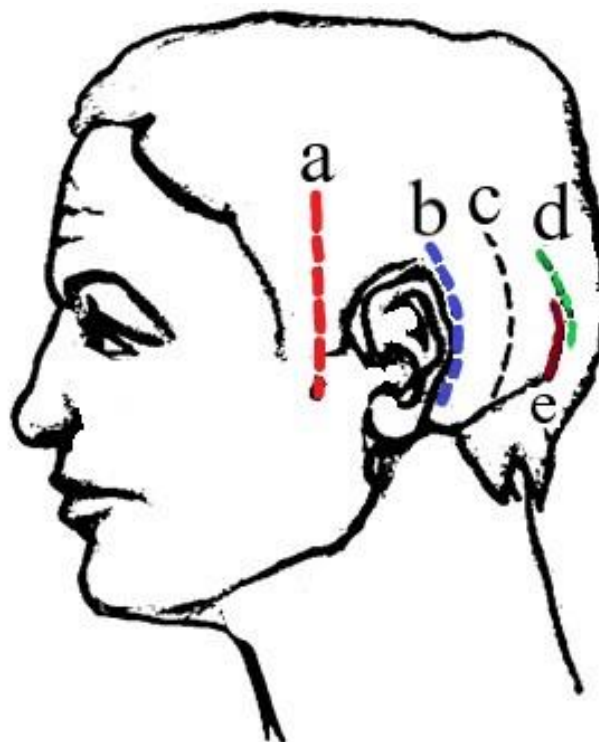


Figure 2 – The projections of neurovascular fascicles of brain department: a – superficial temporal vessels and auriculotemporal nerve; b – posterior auricular vessels and nerve; c – lesser occipital nerve; d – occipital artery; e – greater occipital nerve

Upper sagittal sinus (*sinus sagittalis superior*) is projected at sagittal line connecting the base of the nose with external occipital prominence.

Transverse sinus (*sinus transversus*) is projected at the line connecting external occipital prominence with upper back part of mastoid process. The line mostly corresponds to *linea nuchae superior* (fig. 3, b).

Sigmoid sinus (*sinus sigmoideus*) is projected onto the mastoid crest – back of the Shipo`s triangle (fig. 3, d).

Connection of sinuses (*confluence sinuum*) projects at external occipital prominence (fig. 3, a).

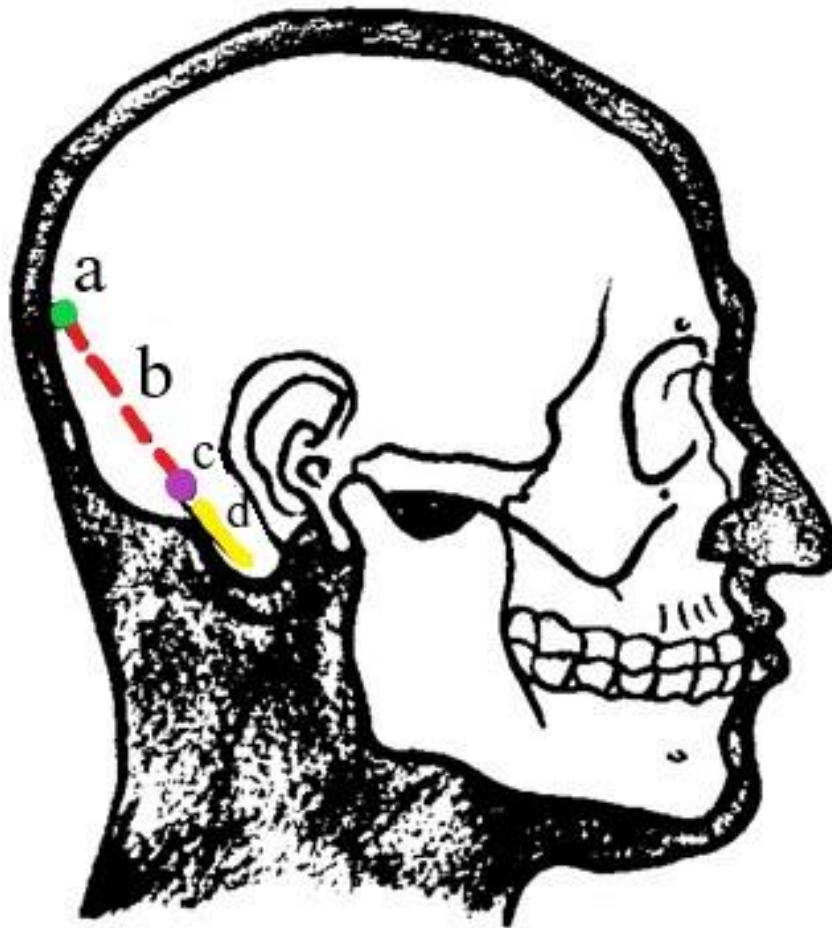


Figure 3 – The projections of connection of sinuses (a), transverse sinus (b), mastoid emissary vein (c), sigmoid sinus (d)

Parietal emissary veins (*vv. emissariae parietales*) are projected on each side from sagittal suture on 2-2,5 cm anteriorly from its posterior margin.

Mastoid emissary vein (*v. emissaria mastoidea*) is projected at the level of the posterior base of the mastoid process (fig. 3, b).

FACE DEPARTMENT

Infraorbital neurovascular fascicle (*a., v., n.infraorbitalis*) projects in the middle of lower orbital margin 0,5-1cm to the below towards *fossa canina* (fig. 1, c).

Mental nerve (*n. mentalis*) – the exit point is on a vertical line passing through the supraorbital foramen and infraorbital foramen at the mid-height of the mandible (fig. 1, d).

Facial artery (*a. facialis*) is projected at curved line going from lower edge of mandible near the front edge of *m. buccinator* towards medial angle of the orbit (fig. 4, a). Facial vein corresponds to straight line going the same way.

Maxillary artery (*a. maxillaris*) is projected at the level of the neck of articular process of mandible.

Parotid gland duct (*ductus parotideus*) is projected at the line going from external acoustic meatus to the midpoint between the angle of mouth and wing of nose (fig. 4, b).

Facial nerve (*n. facialis*). Exit point is projected 2 cm below the line of connection of auricle or at the level of earlobe. Branches go radially towards temporal region, lateral orbital angle, wing of nose, lower edge of mandible and neck (fig. 4, c).

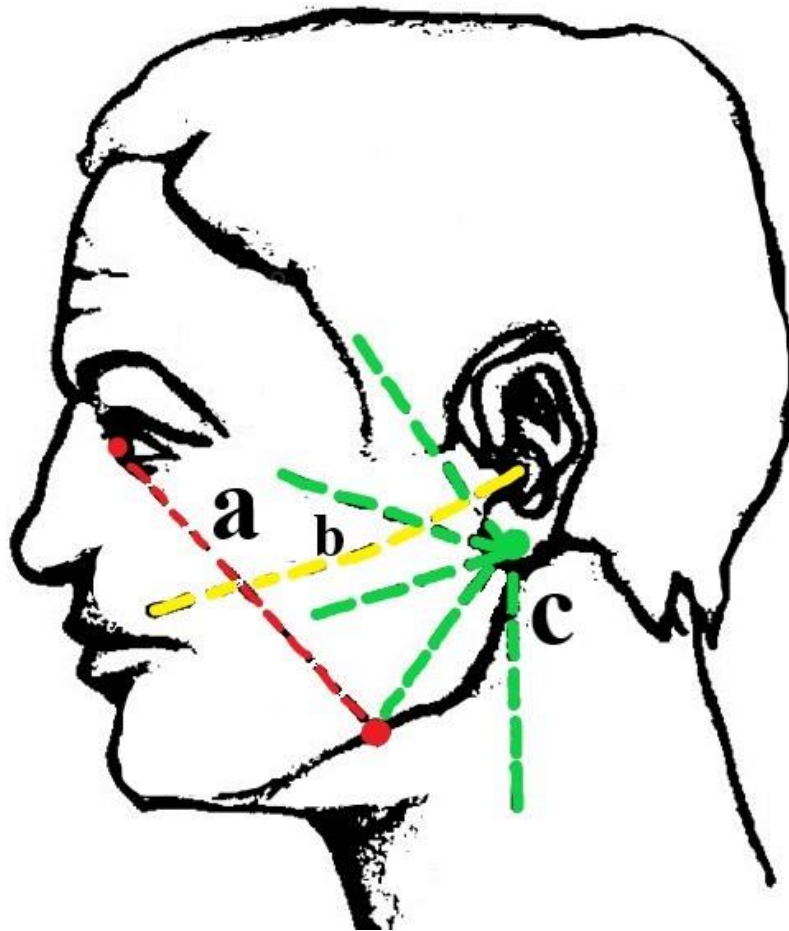


Figure 4 – The projections of facial artery (a), parotid gland duct (b) and facial nerve and its branches (c)

PROJECTIONS OF VESSELS AND NERVES OF THE NECK

Basic neurovascular fascicle of neck (consisting of *common carotid artery*, *internal jugular vein*, *n. vagus*) is projected at the line going from midpoint of lower edge of the mandible and mastoid process towards right sternoclavicular connection; from the left side – towards lateral side of sternal part of *m. sternocleidomastoideus*; the head is bent to the opposite side (fig. 5, a). Bifurcation of common carotid artery corresponds to upper edge of thyroid cartilage.

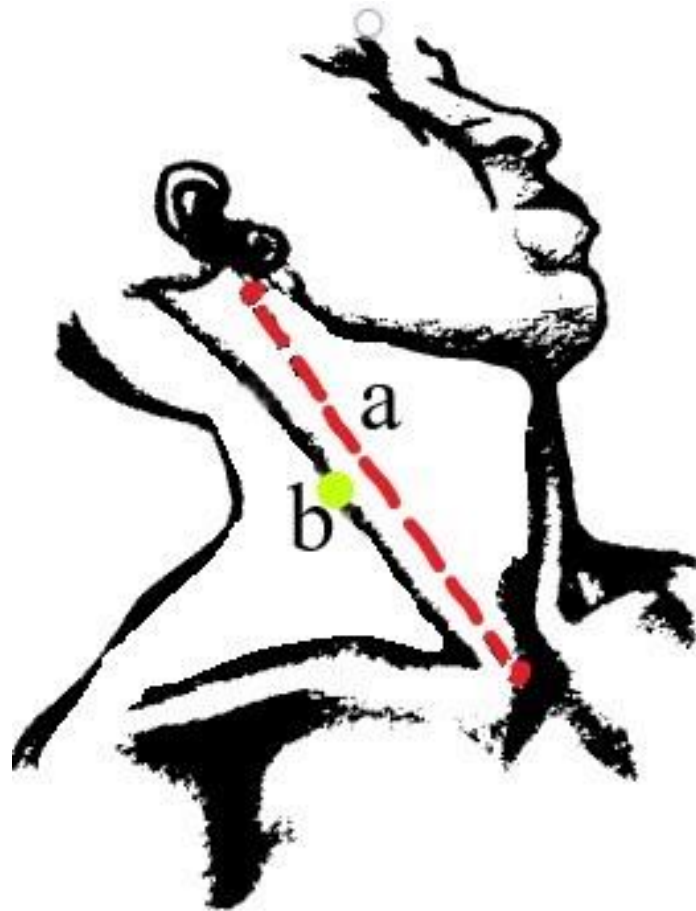


Figure 5 – The projections of basic neurovascular fascicle of neck (a) and cervical plexus (b)

Cervical plexus (*pl. cervicalis*). Branches of cervical plexus correspond to middle of back part *m. sternocleidomastoideus* (fig. 5, b).

External jugular vein (*v. jugularis externa*) is projected at the line going from the angle of mandible towards the middle of clavicle (fig.6, a).

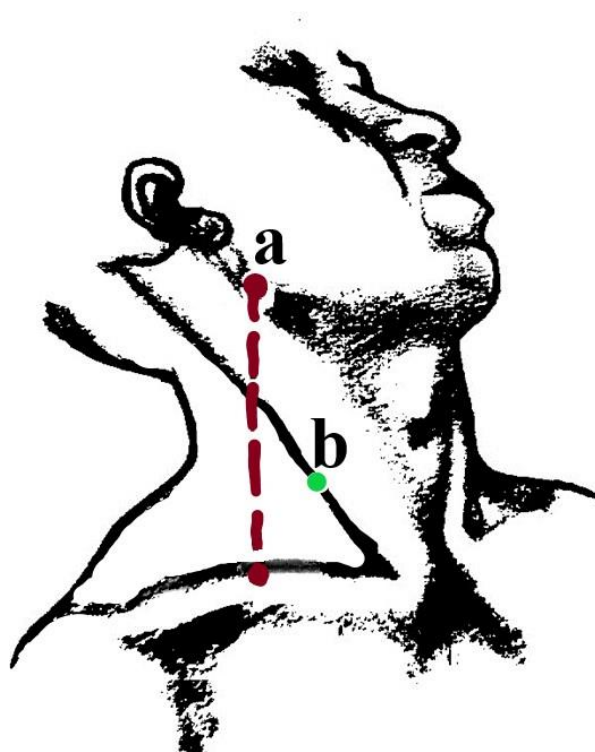


Figure 6 – The projections of external jugular vein (a) and brachial plexus (b)

Brachial plexus (*pl. brachialis*) is projected at back part of *m. sternocleidomastoideus* inbetween middle and lower thirds (fig.6, b).