Supraclinoid

Supraclinoid Segment of the Internal Carotid Artery.

Begins after penetration of dura, continues until bifurcation into Anterior and Middle Cerebral Arteries

Three Branches:

Ophthalmic Artery, Posterior Communicating Artery, and Anterior Choroidal Artery.

Gibo et al. in 1981 studied the microsurgical anatomy of the supraclinoid portion of the internal carotid artery (ICA) in 50 adult cadaver cerebral hemispheres using X 3 to X 40 magnification. The ICA was divided into four parts: the C1 or cervical portion; the C2 or petrous portion; the C3 or cavernous portion; and the C4 or supraclinoid portion.

The C4 portion was divided into three segments based on the origin of its major branches: the ophthalmic segment extended from the origin of the ophthalmic artery to the origin of the posterior communicating artery (PCoA); the communicating segment extended from the origin of the PCoA to the origin of the anterior choroidal artery (AChA); and the choroidal segment extended from the origin of the AChA to the bifurcation of the carotid artery. Each segment gave off a series of perforating branches with a relatively constant site of termination. The perforating branches arising from the ophthalmic segment passed to the optic nerve and chiasm, infundibulum, and the floor of the third ventricle. The perforating branches arising from the communicating segment passed to the optic tract and the floor of the third ventricle. The perforating branches arises from the choroidal segment passed upward and entered the brain through the anterior perforated substance. The anatomy of the ophthalmic, posterior communicating, anterior choroidal, and superior hypophyseal branches of the C4 portion was also examined. Gibo-Rothon (J Neurosurg 55:560-574, 1981) follow the blood flow, incorporated the cervical and petrous portions, and divided the subarachnoid course-supraclinoid-in ophthalmic, communicating, and choroidal segments, enhancing transcranial microscopic approaches [1].

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Gibo H, Lenkey C, Rhoton AL Jr. Microsurgical anatomy of the supraclinoid portion of the internal carotid artery. J Neurosurg. 1981 Oct;55(4):560-74. PubMed PMID: 7277004.