

## Anatomic study of the distribution and territory of the caudal cerebral artery on the surface of the encephalon of cats (*Felis catus domesticus*)

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The abrupt interruption in the blood flux or the sudden fault of oxygen to the central nervous system cells can cause irreparably damage. Therefore, the encephalon blood supply is deep related to the central nervous system development. Methodods and result: Trying to characterize the vascularization of this organ, it were used 26 brains of adult cats, of both sex, without a definable race, acquired, after natural death, from the Zoonosis Center Control and Veterinary Clinics of Distrito Federal. Sequent to the collection, the head artery system, of each animal, was filled with colored aqueous solution of Neoprene Latex "450" and the encephalon and the spinal cord cervical portion were fixed in formaldehyde aqueous solution. After that, the brain was taken from the skull and, through dissections, the arrangement of caudal cerebral artery could be studied. The left and right caudal cerebral arteries were single in 96.1 and 88.4% of the sample, respectively; and were always placed in ventral side of cerebral peduncle, rostrally to oculomotor nerve. When the origin was analyzed, in 69.2% of the samples on the right side and 80.8% on the left, the caudal cerebral artery fin from the inosculation behind the caudal branch of the encephalon carotid artery, with a large contribution, and the basal artery terminal branch. The variations happened due to the increase in the diameter of the basal artery terminal branch (23.1% of the sample on the right side and 3.8% on the left) or when one of this arteries formed herself one of the branches of caudal cerebral artery (7.7% of the sample on the right side and 15.4% on the left). When the way was analyzed, in 88.4% of the samples on the right side and 84.5% on the left, the caudal cerebral artery divided in two branches. The most rostral followed ventrally to the piriform lobe and the most caudal divided in two branches. The most caudal of these branches divided in two new branches that supplied, mainly, the rostral colliculi, although sent out some branches to caudal colliculi too; the most rostral sent out branches that formed the choroid plexus of the third ventricle. In the variations, some branches supplied the dorsal surface of thalamus (7.7% of the sample on the right side and 11.5% on the left), cerebral hemisphere (3.8% of the sample on the right side and none case on the left) and the medial geniculate body (none case on the right side and 3.8% on the left). It was seen that during the way, without a pattern, some small branches were sent out, in both sides, to the middle cerebellar peduncle, dorsal surface or thalamus, mammillary body medial and geniculate body. Because of the fragility of the arteries that compose the cat's brain, during the injection of latex and the dissections, some arteries could be broken, but this fact do not affect the results of this research.

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