

Anatomy of the extraocular muscles in *Cebus apella*

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The description of the capuchin monkey (*Cebus apella*) eyeball morphology is inserted within a wide and important context: the study of the morphological-functional architecture of animal systems. This study has never been published and intends to contribute in the clearing of the vision organ functional anatomy. With support from the Morphology Department of the Brasilia Faculty of Medicine, this work studied twenty eyeballs from ten heads. The specimens were provided by the São Paulo Zoo Foundation and were collected within international bioethics standards. The antimers were dissected and described under magnification (RANSOR II-20). The method includes perfusion of the arterial network with heated water (40 °C), fixation in formaldehyde solution at 10%, injection of stained latex (Neoprene 450, Dupont do Brasil and Glassurit Sulvinil Dye) in the arterial network and fixation in Laskosvisk solution. For quantification purposes, the following was measured: width (at the intermediate point) and length of the extraocular muscles. In the analysis of results, differences in situation, position and direction both of muscles and vascular-nervous elements that compose the orbit were observed. The length of the extraocular muscles ranged in millimeters as follows: flat dorsi muscles: 15.3 right eye (re), 15.3 left eye (le); flat ventral muscles: 16.5 re, 16.8 le; flat lateral muscles: 16.00 re, 16.6 le; flat medial muscles: 13.8 re, 14.9 le. In relation to the width: flat dorsi muscles: 5.0 re, 4.7 le; flat ventral muscles: 4.7 re, 4.2 le; flat lateral muscles: 6.9 re, 6.5 le; flat medial muscles: 5.4 re, 5.8 le. The four flat muscles presented rostral insertion around the anterior portion of the eyeball (polar region in relation to the cornea) and caudal insertion at the common tendinous ring. It could be inferred that the visceral insertions of the flat lateral and medial muscles coincide at the horizontal plan, what does not occur at the vertical plan between the flat ventral muscle and the insertion of the upper eyelid lifting muscle, which is displaced medially in relation to the insertion of the flat dorsal muscle. The situation of the eyeball inside the orbit attracts attention, exhibiting topography typical of the species. The expansion of the frontal lobes, which is significant in this animal, is related with the rotation of orbits towards the median line. A horizontal axis displaces the orbit in relation to the median towards a binocular position, composing and angle of 60°.

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