

Comparative anatomy of anterior thigh muscles in capuchin monkey

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The behavioral comparative analysis of recent primates, associated with the phylogenetic trunks derivative from cladism, generate important knowledge of cognitive evolution human recent, mainly associated with no humans primates from Old World, however, the recent studies on learning and memory of the *Cebus*, demonstrated that this animal is put joint with these others Old World primates, because *Cebus* and Old World primates have the same basic neural substrate for memory and learning tests indicating a long time convergent development of these species. The comparative anatomical studies between the *Cebus* and chimpanzees done by us corroborates these data of evolutionary convergence concerned to the muscles, nerves and vessels of thoracic members. The mainly evolutionary characters acquired by hominids were the erect posture and bipedal locomotion on the soil substituting the brachiation (hand used to locomotion on the trees). There are evolutionary and morphologic similarities between *Cebus* and humans and big similarities in bipedal nature. The survive and arboreous behavioral of no humans primates, indicate morphological similarities between these species and *Cebus*. The anatomical study provides substrate for verification of motors abilities of primates' species considering the muscles numbers, division and individualization of muscular body that insert in osseous portion. The purpose of this work is study the thigh muscles of *Cebus* genus and to compare the results with literature data of these muscles in humans, chimpanzees and baboons, and associate these results with any behavioral aspects. These data will provide the morphological differences and similarities between the *Cebus*, Old World primates and humans, contributing to correlations possible on evolutionary, phylogenetic and behavioral aspects between these species. In this study, 8 *Cebus libidinosus* monkeys were used. They were provided by IBAMA, from the city of Sete Lagoas, Minas Gerais State in 1970, and housed at the anatomy collection of the Federal University of Goiás. The animals were carefully dissected using the naked eye or with the aid of 10x stereoscopic magnification. The studied muscles were 1) sartorius, 2) fascia lata tensorius, 3) quadriceps phemoral. Was observed similarities in origin, insertion and localization of these muscles in studied primates, with specific differences to human. The anatomic position and the human biotype, mainly in the pelvis, can be the reason of these differences, because in the non humans primates the pelvis is adapted to jumper and do not support the weight body complete, hence the position and insertions, putatively, are different. These data demonstrate that *Cebus* and baboons are similar than studied thigh muscles, putatively because of the identical locomotion mode in the soil that is in quadruped position to both.

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