

Comparative anatomy of posterior 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. The origin, insertion and localization of posterior muscles of thigh studied, that were 1) semitendinosus, 2) semimembranosus proprius and 3) accessory, 4) ischio femoral, 5) biceps femoral. Only the biceps femoral present different origin in relation than the others studied primates. The others muscles are similar to chimpanzees and baboons, but do or similar to humans, in specific aspects. In conclusion, the posterior thigh muscles of *Cebus*, in general terms, are more similar to baboons, putatively because the quadruped behavioral of both animals. These data can be corroborated by different bipedal position between these primates and use of pelvic members to locomotion, that in humans are used mainly to locomotion and sustentation in soil.

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