Population follicular quantitative study of squirrel monkey (*Saimiri sciureus*)

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The Common Squirrel Monkey (*Saimiri sciureus*) is a small neotropical primate from the Cebidae family, and native to the tropical areas of South America. Studies on the follicular development and ovulation from this species are necessary for the successful application of reproductive biotechnology programs, which includes the manipulation of oocytes enclosed in preantral follicles (MOIFOPA) and, seeks to isolate, culture or conserve preantral follicles, to optimize the use of oocyte potential with high genetic value or from endangered species. The MOIFOPA requires the knowledge about morphologic aspect of the ovarian follicles. The objective of the present study was to identify, by morphological and quantitative analysis, the follicular ovarian population in S. sciureus. Ovaries (n = 6) from 6 adults S. sciureus were obtained from animals that came naturally to death at Centro Nacional de Primatas (Ananindeua-Pa). Each whole ovary was submitted to histological analysis. The ovaries were fixed in formaldehyde 10% and sectioned serially at thickness of 5 μm. Each 10th section of ovaries tissue fragment was mounted and stained with eosin-hematoxylin. Only follicles that presented a visible oocyte nucleus in the analyzed section were counted. The preantral follicles were classified as primordial when presented a layer of flattened granulosa cells surrounding the oocyte, transitional when the oocyte was surrounded by a layer of flattened and cuboidal granulosa cells, primary when the oocyte was surrounded by a single layer of cuboidal granulosa cells, and secondary when the oocyte was surrounded by two or more layers of cuboidal cells. The antral follicles, those that presented a cavity filled with follicular fluid, were classified as tertiary or pre-ovulatory follicles. The number of ± standard error, as ovarian follicles was represented in mean following: 24,8 ± 9,0% for primordial follicles, 27,6± 8,5% for transitional follicles, 25,9± 12,7% for primary follicles, 12,5 ± 2,9% for secondary follicles, 9,0 ± 3,0% for antral follicles. It can be concluded that differently from other mammalian species, the ovarian follicular population in adult Saimiri sciureus females is variable, with the greater number of follicles distributed in the primordial, transitional and primary classes.

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