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Histological evaluation of corpus luteum in pseudopregnant and pregnant queens
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The feline species has characteristics in its reproductive physiology as ovulation induced and the luteal phase, which are still unknown. Pseudopregnancy in domestic cats is a peculiarity of the estrous cycle, with the occurrence of ovulation, without the presence of embryos; in this situation, there is formation, development and lysis of corpus luteum (CL). In felines, for the pregnancy to occur it is necessary an increase in progesterone levels, which remain high until close to the delivery. In pseudopregnancy progesterone, hormone levels follow in a similar way to the pregnancy, but for a shorter period (40 to 45 days). The comparison of survival of CLs, the morphological, functional and secretory activity in condition of pregnancy and pseudopregnancy in species of induced ovulation may provide important knowledge. Thus, the objective of this study was to describe the luteal cells morphology in domestic cat pregnancy and pseudopregnancy. Pregnant (n=7, CLs and embryos) and pseudopregnant (n=6, absent embryo and CLs) queens were subjected to ovariohysterectomy, and the ovaries and uterus were isolated. The uterus were wash by flushing³ method. The groups were separated according to the presence or absence of embryos in the uterus. CLs were quantified and the samples were embedded in paraffin, cut to 5 μm and stained with HE. Fourth CLs (23 in the pregnant/17 in the pseudopregnant) were counted in both groups. Histological findings of the pregnant group showed 6 out of 7 cats presented polyhedral luteal cells, presence of peripheral vacuoles characteristic of type I (Figure 1. A). Pseudopregnancy group showed larger vacuoles coarsely scattered in the cell nuclei, characteristic type II (Figure 1. B), featuring functional inactivity. These results demonstrate that CLs in pregnant cats have active luteal cells able to secrete progesterone for a longer time than CLs in pseudopregnant queens, reinforcing the literature data that consider the survival of CLs in pseudopregnants cats (40/45 days) shorter than those pregnant.