TITEL: SEPSIS ASSOCIATED WITH *Chromobacterium violaceum* IN COUGAR (*Puma Concolor*) OF CAPTIVITY

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ABSTRACT:

The genus *Chromobacterium* is gram negative bacilli, aerobic or facultative anaerobic, present with colonies of violet coloration and are widely diffused in the environment. They are bacteria that cause rare infections, of rapid dissemination and high mortality. The objective of this work was to report a case of *Chromobacterium violaceum* in cougar. In July 2018, after a cold air mass, an old female, feline leukemia virus (FeLV) positive cougar, from the Universidade Federal de Mato Grosso (UFMT) zoo, showed apathy, hyporexia, and died. At the necropsy, petechiae, ecchymoses and reddish-brownish bruising on almost every surface were observed in the lung. In the liver, the entire capsular surface and about 30% of the parenchyma contained irregular, multifocal nodules with homogeneously yellowed surface coalescents. Samples of the heart, liver, lung and abdominal and thoracic liquids were sent to the microbiology laboratory. A violet bacterium was inoculated in all organs, in the form of bacilli, gram negative. In the biochemical tests, the isolate was compatible with *C. violaceum.* The confirmation of the species occurred from the extraction of genomic DNA from the isolates and followed by 16S rDNA PCR (primers 27F and 1492R) of bacteria and subsequent sequencing. Result was compared by BLAST with GenBank data, being 100% identical with *C. violaceum* (Access: MK965251). *C. violaceum* infections are rare and have a high percentage of mortality. There are reports in humans and animals, being this the first report in *Puma concolor* of captivity. The sudden drop in temperature associated with previous co-infection with the Feline Leukemia virus probably caused apathy, decreased immunity, facilated *C. violaceum* sepsis and sudden death. In most cases the liver is the main organ involved and presence of comorbidities (leukemia, diabetes and kidney disease). It is concluded that the animal possibly died of sepsis associated with *C. violaceum*. Due to the occurrence of multiple-isolated in vital organs. It is a widely disseminated bacterium in the environment and that cause rapid evolution and sudden death of the animal.

Keywords: *Chromobacterium*, feline leukemia, sepsis, FeLV