

TITLE: PNEUMONIA BY *Pasteurella multocida* SEROTYPE A IN VEADO-CATINGUEIRO (*Mazama gouazoubira*): CASE REPORT.

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ABSTRACT: *Pasteurella multocida* is a highly pathogenic bacterium, causing serious diseases in several species, such as avian cholera in chickens and turkeys, atrophic rhinitis in swine, hemorrhagic sepsis in cattle and sepsis in humans. The present study aimed to report the isolation of *P. multocida* and detection of *toxA*, *tbpA* and *pfhA* virulence genes in adult female veado- catingueiro (*Mazama gouazoubira*) at the Federal University of Mato Grosso Zoo, with suspicion of bacterial pneumonia. The animal was admitted to the HOVET-UFMT presenting difficulty in keeping in season, muscle tremors, tachypnea and crackling rales on auscultation, with rapid clinical evolution, leading to death. The findings of necropsy and histopathology were suggestive of bronchopneumonia characterized by consolidation of pulmonary lobes, edema, focal areas of hepatization associated to the histological characterization of multifocal areas of necrosis delimited by fibrous connective tissue. A fragment of the lung was submitted to microbiological analysis and *P. multocida* was isolated. The DNA of the isolate was extracted and subjected to PCR with complementary oligonucleotides sequences of the *kmt1* and *hyaD-hyaC* genes, with positive amplification for both, confirming the involvement of *P. multocida* serotype A. The isolate was tested for the presence of *toxA*, *tbpA* and *pfhA* virulence genes, being positive for the *pfhA* and *tbpA* genes. *P. multocida* is described in the literature infecting several species of hosts, including wild animals, being this the first case described *Mazama gouazoubira*. Filamentous haemagglutinins, encoded by the *pfhA* gene, are considered important for adhesion and initial colonization of the respiratory tract and have been frequently associated with serotype A in lower respiratory tract infections and pneumonia in swine and cattle. The *tbpA* gene, also positive in this study, is related to the uptake of iron, an important compound for the maintenance of infection, constantly related to hemorrhagic sepsis in ruminants and swine. The present work demonstrates the importance of *P. multocida* serotype A in pneumonia in wild animals. This is the first report of bronchopneumonia by this agent in veado-catingueiro (*Mazama gouazoubira*). Understanding and recognizing the susceptibility of wild species to Pasteurellosis is an important tool in disease prevention in humans and other animal species.

Keywords: *pfhA*, *tbpA*, pasteurellosis, captive animals, cervidae.

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