**TITLE:** AN OUTBREAK OF CONIDIOBOLOMYCOSIS IN SHEEP IN THE STATE OF AMAZONAS, NORTH, BRAZIL

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## ABSTRACT

Conidiobolomycosis is an emerging disease caused by saprophytic fungi, genus Conidiobolus spp., found in hot and humid regions affecting man and animals. Sheep present rhinofacial and nasopharyngeal forms. Injuries can reach the eye orbit resulting in unilateral exophthalmos, craniofacial asymmetry, corneal ulcer and blindness. Some animals show neurological signs after the lesion reach the cerebral cortex. organs. Hematogenous spread reaches lung and other An outbreak of conidiobolomycosis in sheep in the municipality of Borba, Amazonas is described. In a flock of 57 sheep grazing in flooded area, 14 became ill and 12 died between years 2013 and 2015. Two young sheep, one male and one female, were examined, presenting with dyspnea, bloody nasal discharge, unilateral facial asymmetry, depression. exophthalmos, corneal ulcer and blindness. The clinical course was 30 days and due to the severity of the lesions, euthanasia was chosen. At necropsy, an ulcerated area was found containing a yellow friable mass with irregular and granular consistency in the region of the ethmoidal turbine filling the nasal sinus and destroying part of the shells and nasal septum, exophthalmia with invasion of the retrobulbar region, filling orbit, adhering to the eyeball and adjacent structures projecting the eye externally, the lesion crossed the crib-like blade reaching the frontal region of the brain. In the lungs, there were firm yellow nodules in the pleura and parenchyma. Fragments were fixed in 10% formaldehyde, processed for histology and stained by hematoxylin and eosin (HE). Samples were sent to conidiobolomycosis immunohistochemistry (IHC) (Biotinstreptavidin-peroxidase kit). Histologically, they were observed in the granulomatous infiltrated nasal cavity with central areas of necrosis and negative images of hyphae surrounded by Splendore-Hoeppli (SP) reaction. In the cerebral cortex, granulomas infiltrated the cribiform plate, with malacia and infiltrate of foamy macrophages (gitter cells), epithelioid macrophages, multinucleated giant cells, lymphocytes and plasma cells. In the lung, thickening of the interalveolar septum, occlusion of the alveolar lumen by granulomatous infiltrate and presence of intralesional hyphae surrounded by SP reaction. In IHC samples were positive for conidiobolomycosis. The diagnosis was based on epidemiological, clinical-pathological findings and confirmed by IHC. It is the first report of the disease in sheep in the Amazon.

Keywords: Conidiobolomycosis, Rhino-orbitocerebral, Sheep.

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