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Enterotoxemia hemorrágica por *Clostridium spp.* en coexistencia con *Sarcocystis spp.* en alpacas (*Vicugna pacos*). Reporte de caso clínico

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ABSTRACT

Hemorrhagic enterotoxemia is caused by species of genus *Clostridium*. They mainly affect the alimentary tract through exotoxins. Sarcocystiosis is produced by species of the genus Sarcocystis which produce cysts in muscle tissue. The objective of this work was to report a clinical unusual case of simultaneous presence of clostridiosis and sarcocystiosis in South American camelids in Ecuador. The study included a clinical characterization, necropsy, histopathology and micro-biology of one sudden death case of a male alpaca (*Vicugna pacos*) with a background of emaciation, loss of appetite, ataxia and isolation. Macroscopic findings included gaseous edema with bubbles of gas in the subcutaneous tissue, intradermic diffuse hemorrhages (abdomen and thorax), empty digestive tract with abun-dant gas, diffuse peritonitis, small intestine hyperemic with generalized petechial hemorrhages and bloody content, cirrhotic liver, hemorrhagic kidneys, enlarged heart, pericarditis, endocarditis, hemorrhagic lungs and tracheal mucous membrane. *Sarcocystis spp*. cysts were evidenced in muscle tissue. Histopathology findings were compatible with macroscopic findings. Briefly, hepatic tissue showed abscesses and abundant sporulated bacilli. Muscle tissue did not show bacilli but did show inflammatory myositis and parasite cysts. Numerous Gram positive sporulated bacilli were pre-sent in liver, lung and peritoneal fluid. Taken together, general findings suggest hemorrhagic enterotoxemia by *Clostridium spp.*, concurrent with chronic muscle sarcocistiosis, the last representing an unusual condi-tion (it is usually evidenced at older ages) in young animals as in our case, probably originated by chronic stress related to immunosuppression previously asso-ciated to chronic stress. It is recommended, when considering the import of South American camelids, to allocate them in farms with agro-ecologic conditions that resemble as much as possible their original environment.

Keywords: Clostridiosis, histopatology, microbiology, sarcocistyosis, South American camelids

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