

First description of echinococcus ortleppi and cystic echinococcosis infection status in Chile

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Cystic echinococcosis (CE), a parasitic disease caused by the cestode *Echinococcus granulosus* sensu lato (s.l.), is a worldwide zoonotic infection. Although endemic in Chile, information on the molecular characteristics of CE in livestock remains scarce. Therefore we aimed to describe the status of infection with *E. granulosus* s.l. in cattle from central Chile and also to contribute to the study of the molecular epidemiology of this parasite. According to our results, the prevalence of CE is 18.84% in cattle, similar to previous reports from Chile, suggesting that the prevalence in Santiago Metropolitan area has not changed in the last 30 years. Most of the cysts were found only in lungs (51%), followed by concurrent infection in liver and lungs (30%), and only liver (19%). Molecular characterization of the genetic diversity and population structure of *E. granulosus* s.l. from cattle in central Chile was performed using a section of the cytochrome c oxidase subunit 1 (cox1) mitochondrial gene. *E. granulosus sensu stricto* (s.s.) (G1-G3 genotypes) was confirmed by RFLP-PCR to be the dominant species affecting cattle (284 samples/290 samples); we also report for the first time in Chile the presence of *E. ortleppi* (G5 genotype) (2 samples/61 samples). The

Chilean *E. granulosus* s.s. parsimony network displayed 1 main haplotype. Additional studies using isolates from many locations across Chile and different intermediate hosts will provide more data on the molecular structure of *E. granulosus* s.s. within this region. Likewise, investigations of the importance of *E. ortleppi* in human infection in Chile deserve future attention. © 2018 Corrêa et al.

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