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Genotypic variability and polymorphism analysis of cox1 and nad1 genes in *Echinococcus granulosus* infecting cattles, goats and sheep from south of Iran

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Echinococcus granulosus, is one of the most important zoonotic parasites not only infecting the wide range of domestic and wild herbivores causing hydatidosis and considerable economic losses, but also threatening the man health especially in rural regions in many countries including Iran. In the present study, not only the geographical, biological strain(s) of *E. granulosus* and the transmission among different animal species in Jahrom, Iran were identified, but also genetic variability within isolates was studied. Herein, we found 149 (4.85%) out of 3074 slaughtered livestock were infected by hydatid cyst. The mean prevalence of cystic echinococcosis in sheep, cattle and goats were found as 11.34, 11.04 and 2.8% respectively. However, the result indicated a positive correlation between age of the animals and infection with the hydatid cyst (P≤0/001), no significant relation was observed between males and females in infection by cystic echinococcosis. In this study, lung (79 cases) and liver (45 cases) organs are the predominant location for cyst formation in the host organs. Also, no statistical correlations were observed between the number of cysts in the hosts' organs and the region of sampling with the infection rate. Based on mitochondrial DNA markers (cox1 and nad1 genes) sequencing analysis, 2 out of 3 genes in cattle isolated samples belong to G8 genotype, while the third isolate belonged to G3 genotype. Five samples isolated from sheep and goat possessed the G6 genotype. This study is the first reported *E. granulosus* infection and its genotypic variation in south of Iran.

Biography

Belal Amand has dedicated more than eight years for academic training. He has completed Bachelor's degree and a Master's degree in Biology. He has worked as Lecturer-Researcher in the university. During his Master's degree and working in the university, he has elaborated on molecular infectious disease, and has published 4 papers in international journals.

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