

Prevalence of Echinococcus Granulosus in Carnivores of Iran: Systematic Review and Meta-Analysis Study

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Abstract

In this study, the prevalence of Echinococcus granulosus was surveyed by meta-analysis and systematic review. Using main keywords of Echinococcus granulosus, dog and carnivores, we searched standard sites such as Google scholar, SID, Pubmed, Iranmedex, Irandoc, Science direct and magiran. Fifteen reliable articles were reviewed and analyzed by STATA software, Ver 11. From obtained articles, the number of 2271 dogs, 167 jackals and 174 foxes have been investigated by Iranian researchers. The infection rate of E.granulosus was reported 27.4% (95% CI, 20.9-33.9) in this study in that the highest from north and north west of Iran with prevalence of 33.3 % (CI:22.1-44.4), the lowest by 21.9 % (CI:12.5-31.3) from west and south west of Iran and the average from the central region of Iran (26.9%; CI:12.8-41). Among cities the highest (64%) and the lowest (3.3%) infection rate were reported in Garmsar city (2010) and Sistan and Balochestan province (1997). Given that the overall prevalence of E.granulosus in Iran is high, Control and prevention measures including destruction of stray dogs and treatment of owner dogs seems to be necessary.

Keywords: Echinococcus Granulosus, Carnivores, Iran, Systematic Review