

Epidemiology of Taeniosis, Cysticercosis and Trichinellosis In Iran: A Systematic Review

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Abstract

Background

The aim of this review was to establish the current epidemiology of taeniosis, cysticercosis and trichinellosis among humans and animals in Iran by carrying out a comprehensive assessment of published articles reporting on these foodborne zoonotic diseases across the country.

Methods

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline was used in the search for relevant published articles reporting on cysticercosis, taeniosis and trichinellosis in Iran using a number of appropriate key words. The search was conducted through PubMed, Web of Science, Google Scholar, SpringerLink, SCOPUS, WHOLIS, FAO and CDC. Published scientific articles including journals, books and book chapters reporting on cysticercosis, taeniosis and trichinellosis in Iran for the period between 1967 and 2018 were selected.

Results

A total of 37 articles met the search criteria and were incorporated in this review. Of these, 10 (27%) reported on human taeniosis, 15 (40.5%) on cysticercosis (10 on *Taenia saginata* and five on *Taenia* spp. cysticercosis) and 12 (32.5%) on trichinellosis. *T. saginata* was implicated in all human taeniosis cases. All *Taenia* spp. cysticercosis cases were reported among domesticated pigs and wild animals. A case of neurocysticercosis was reported in a male patient at Shohada Hospital in Tehran. Eleven (91.7%) of the 12 studies reported on trichinellosis among wild animals, while one (8.3%) study detected anti-*Trichinella* IgG in 8 (2.2%) of the 364 at-risk human beings tested. Nevertheless, most of these studies were carried out in northern Iran.

Conclusion

This review found *T. saginata* to be the most prevalent and of greater economic and public health significance in Iran. However, *T. solium* and *Trichinella* spp. were of little significance to human health. More studies should focus on other regions besides northern Iran.