Chest Pain As a Sign of Cardiac Cystic Echinococcosis: A Systematic Review and Meta-Analysis

Pouriya Golmohammadi Khankandi[1], Erfan Banisefid[1], Kosar Baghernezhad[1], Rasa Beheshti[1], Sina Hamzezadeh[1], Soheil Nemati[2], Zahra Samadifar[2], Hamid Owaysee[3], Elnaz Javanshir[2*], Amirreza Naseri[1]

[1]Student Research Committee, Tabriz University of Medical Sciences, Tabriz, Iran
[2]Cardiovascular Research Center, Tabriz University of Medical Sciences, Tabriz, Iran
[3]Department of Infectious Disease, Tabriz University of Medical Sciences, Tabriz, Iran

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***Corresponding Author:**
Cardiovascular Research Center, Tabriz University of Medical Sciences, Tabriz, Iran

Citation:
Golmohammadi Khankandi P, Banisefid E, Baghernezhad K, Beheshti R, Hamzezadeh S, Nemati S, Samadifar Z, Owaysee H, Javanshir E, Naseri A. Chest Pain As a Sign of Cardiac Cystic Echinococcosis: A Systematic Review and Meta-Analysis. *Iranian biomedical journal*. Supplementary (12-2024): 124.

ABSTRACT

Introduction: Human echinococcosis (CE) is a prevailing health issue in underdeveloped and developing nations. Cardiac involvement is a moderately infrequent manifestation of Echinococcus infection. The present study aimed to determine the rate of chest pain as a symptom of cardiac CE.

Search Strategy: This study included clinical studies reporting the proportion of cardiac EC patients with chest pain. Reviews, letters, preclinical studies, conference abstracts, and non-English papers were not included. A systematic search was performed in the PubMed and Scopus databases, and the risk of bias in the included studies was assessed using the JBI Case Series checklist. Meta-analysis was performed using the Comprehensive Meta-Analysis Third Edition (CMA3).

Results: The rate of chest pain in patients with cardiac CE was reported in 23 out of 3,985 studies. The rates were 41.5% (95% CI: 36.1%-47.0%) and 43.2% (95% CI: 35.1%-51.7%) based on the finite element method and the rapid-eye-movement analysis, respectively. Heterogeneity was borderline (I2: 49.07%; *p* value for heterogeneity = 0.004). Therefore, the results of both models were presented.

Conclusion and Discussion: Cardiac involvement of CE can be presented with chest pain, and it should be considered in suspected patients.

Keywords: Chest pain, Echinococcosis, Systematic review

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[DOI: 10.61186/ibj.25th-11th-IACRTIMSS]