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Palpation As an Indicatory of Cardiac Cystic Echinococcosis: A Systematic Review and Meta-Analysis

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ABSTRACT

Introduction: The issue of human cystic echinococcosis (CE) poses a significant health challenge in both underdeveloped and developing nations. It is worth noting that cardiac involvement represents a rare manifestation of Echinococcus infection. Hence, the primary aim of this study was to ascertain the prevalence of palpitation among individuals diagnosed with cardiac EC, thereby shedding light on this particular aspect of the disease.

Search Strategy: The approach utilized in this study involved a systematic examination and meta-analysis, focusing on clinical research that documented instances of cardiac CE. Reviews, letters, preclinical investigations, conference abstracts, and studies published in languages other than English were deliberately excluded from the analysis. The evaluation of potential bias in the chosen research studies was performed by employing the Critical Appraisal Checklist for Case Series developed by the Joanna Briggs Institute. A methodical search strategy was implemented across well-known databases, including PubMed and Scopus. For data analysis, the meta-analysis was executed utilizing the advanced features of the third iteration of the Comprehensive Meta-Analysis (CMA3) software.

Results: Following a meticulous screening process that involved 3985 records, a total of twenty-four studies were identified for inclusion in the analysis, all of which provided insights into the prevalence of palpitation among patients with cardiac CE. The meta-analysis results highlighted a substantial frequency of palpitation at 34.9% in the specific patient subset, with 95% Confidence Intervals (CIs) varying from 29.8% to 40.3%. In addition, the statistical analysis unveiled a moderate degree of heterogeneity (I_2 = 29.55%) within the range of studies, although the p-value for heterogeneity was not statistically significant (p = 0.087).

Conclusion and Discussion: In conclusion, cardiac CE may manifest with palpitation as one of its clinical features. Therefore, in regions where the disease is endemic, healthcare providers should be vigilant in considering cardiac CE as a potential differential diagnosis when encountering patients presenting with palpitation symptoms.

Keywords: Echinococcosis, Palpation, Systematic review

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