**Original Article** 

Iran J Public Health, Vol. 50, No.11, Nov 2021, pp.2302-2308



## Estimation of Burden of Cystic Echinococcosis in Iran Using Disability Adjusted Life Years (DALYs) in 2018

Fateme Parandin<sup>1</sup>, Fatemeh Heydarpour<sup>2</sup>, Mehdi Mohebali<sup>1,3</sup>, \*Ahmad Ali Hanafi-Bojd<sup>4</sup>, Ali Akbari Sari<sup>5</sup>, Mohamad Zeynali<sup>6</sup>, Ahad Alizadeh<sup>7</sup>, Naser Nazari<sup>8</sup>, Farzad Kaveh<sup>6</sup>,\*Mohammad Bagher Rokni<sup>1,3</sup>

1. Department of Medical Parasitology and Mycology, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

2. Medical Biology Research Center, Health Technology Institute, Kermanshah University of Medical Sciences, Kermanshah, Iran

3. Research Center for Endemic Parasites of Iran, Tehran University of Medical Sciences, Tehran, Iran

4. Department of Medical Entomology and Vector Control, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

5. Department of Health Management and Economics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

6. Center of Communicable Diseases Control, Ministry of Health & Medical Education, Tehran, Iran

7. Medical Microbiology Research Center, Qazvin University of Medical Sciences, Qazvin, Iran

8. Department of Parasitology and Mycology, School of Medicine, Kermanshah University of Medical Science, Kermanshah, Iran

\*Corresponding Authors: Emails: roknimoh@tums.ac.ir; aahanafibojd@tums.ac.ir

(Received 12 Nov 2020; accepted 14 Jan 2021)

## Abstract

**Background:** Human hydatidosis as a public concern has increased in a number of countries that have reduced control programs for the disease due to lack of resources or policies. We aimed to estimate Disability-Adjusted Life Years (DALYs) for human hydatidosis in Iran in 2018.

**Methods:** Data were collected from the Center of Communicable Diseases Control, Ministry of Health &Medical Education, Tehran, Iran in 2018. To calculate DALYs, years of life lost due to premature death (YLL) with years of life with disability (YLD) were calculated according to the formula as DALY = YLL + YLD. The standard life expectancy lost method (SEYLL) was used to calculate the years lost due to premature death.

**Results:** DALYs for human hydatidosis was calculated as 1210.12 years (YLD equals to 177.12 and YLL equals to 1033) in Iran for the year 2018. It was estimated to be 700.2 years for men and 509.8 years for women. DALYs in men were significantly different from women (P= 0.001) so DALYs were more in men than women were. YLD was calculated at 78.228 years in men and 98.892 years in women and in both men and women at 177.12 years. YLD was significantly different in women compared to men (P=0.001), so YLD in women was more than in men.

**Conclusion:** We reached considerable indices for hydatidosis in our study. Therefore, disease prevention and control programs in Iran seem necessary by the policy makers.

Keywords: Hydatidosis; Burden; Disability-adjusted life years; Human; Iran

## Introduction

Cystic echinococcosis (CE) is a severe zoonotic disease that affects people all over the world. CE

was included in the official list of the18 Neglected Tropical Diseases by the WHO. In addition to



Copyright © 2021 Parandin et al. Published by Tehran University of Medical Sciences. This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license (https://creativecommons.org/licenses/by-nc/4.0/). Non-commercial uses of the work are permitted, provided the original work is properly cited.