

Seroepidemiological Study of Human Hydatidosis using ELISA and antigen B in Ardabil province

Abstract

Background and Objective: Hydatidosis is a parasitic disease caused by the larvae of the parasite *Echinococcus granulosus*, which commonly affects the liver and lungs. It was first described as a bag full of water. The life cycle of the parasite occurs between dogs and a variety of ruminants, and humans are often infected by eating the parasite's eggs with vegetables or direct contact with the dog. Primary cysts depend on the size and location of their replacement, with most cases of cysts occurring in the liver (about 70%) and lungs (10-15%) and 5 to 10% in other organs such as bones, kidneys, and brain. The growth of the cysts is slow and is only noticed when it is enlarged in size and puts pressure on the adjacent organs and causes clinical symptoms. Leakage of cyst fluid into the body causes sensitivity and eosinophilia 50-40%, torn Sudden onset of cysts causes severe anaphylactic shock, which in some cases results in death.

Aim: Because this disease causes a lot of economic and health damage in the world and it is necessary to know it from a health and economic point of view, and also shows that in recent years not only the prevalence of the disease in the world has not decreased but also in many countries. The severity of the disease in humans and animals is spreading. Therefore, we decided to design and conduct a study in this field to investigate the prevalence of this disease.

Methods: In Ardabil province, after coordination with the deputy of health of the province and coordination with health networks, using clustered files and selecting the household number (as Sarkhosheh), clusters and their number were randomly selected so that the samples in terms of number to Divided evenly between town and village. Since the purpose of this study was to determine the prevalence of Ardabil, so considering that the population of cities and villages in this city was almost equal, ie almost each included 250,000 people, half of the study population from the city and half from the population from The village was selected. Serum prevalence of hydatid cyst in villages and cities of Ardabil province, which are located in four geographical directions: north, south, east and west of this province, Ardabil, Nair, Khalkhal, Meshginshahr, Parsabad villages were studied.

Results: In this study, after examining 950 human serum samples, the results showed that the prevalence of hydatidosis was 4.4% equal to 42 persons and highest in the age group of 20-29 years, was higher in women than men, the frequency of infected people in Khalkhal was the highest, more rural They are exposed to this parasite and also have hydatidosis with factors such as occupation, contact with dogs, clinical symptoms and consumption of vegetables.

Conclusion: Although the seroprevalence of hydatid cyst was relatively low in Hamadan province, yet, due to the importance of the disease and zoonotic feature of the organism, all preventive measures should be taken into consideration.

Keywords: seroepidemiology, human hydatidosis, ELISA, Iran