Brief Communication

AN ANALYSIS OF HYDATID CYST SURGERIES IN TEHRAN MILAD HOSPITAL, IRAN, DURING 2001- 2004

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ABSTRACT

Hydatidosis is a zoonotic disease which is due to infectivity with larval stage of dog tapeworm, *"Echinococcus granulosus".* The disease is chronic and cysts can be lodged in different organs of the intermediate hosts. It has cosmopolitan distribution and impact health and economical challenges for the many countries throughout the world. In Iran, human cases are constantly reported from different medical centers, Therefore, accurate information on the distribution of the disease is first step for the control and prevention. In this descriptive study, demographic information (sex, age, occupation) about patients who underwent hydatid cyst surgeries during 2001-2004 in Tehran Milad Hospital were collected and analyzed.

Among 78 patients who had hydatid cyst operations in Milad hospital, 56.5% were female and 43.5% male. Liver was the most commonly invovled organ. According to the result of this study, females were found more infected with hydatid cysts than males.

KEY WORDS: Hydatid cyst, surgery, Iran.

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INTRODUCTION

Hydatid disease is a zoonotic infection caused by *Echinococcus* species and is divided into two histopathologic forms: cystic and alveolar form. The cystic form of the disease is more common and usually characterized with large, fluid – filled, uniloculer cysts in which *Echinococcus granulosus* is the causative agent.[1] Hydatid cyst is found in human and some other mammalian tissues, especially liver and lungs and causes echinococcosis.[2] The disease poses an important public health problem in many areas of the world, particularly among populations that practice sheep husbandry.[3] Cystic echinococcus is endemic in Iran, and is maintained in three distinct cycles, a livestock / dog domestic cycle, a desert cycle between dogs and camels, and a cylvatic cycle between wild carnivores and wild ruminants.[4]

The *E . granulosus* cycle is typically a dog-sheep cycle and implies contamination of a sheep through the feces of an infected dog. Humans accidentally take the place of the sheep in the parasite cycle through close contact with an infected dog.[5] Humans are usually a "dead- end" for the parasite.[6] Serological methods, used for the diagnosis of hydatid disease are direct hemagglutination, latex agglutination, immunoelectrophoresis, skin tests and ELISA.[7] Radiological imaging methods such as computed tomography (CT) and MR imaging play an important role in the diagnosis.[8,9]

Therapy for echinococcosis is based on the size, location, and symptomatic complications

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of the cysts. Surgery is the treatment of choice.[10-12] Preventive strategies would, therefore, involve health education, reduced contacts with dogs and sheep and with effective disposal of their wastes.[13]

In Iran, human cases are constantly reported from different medical centers. Milad hospital is located in Tehran, capital city, and people from different parts of the country are referred here for hydatid surgery. In this retrospective study the hydatid surgeries in this hospital during five years were analyzed.

PATIENTS AND METHODS

Milad hospital is a private sector healthcare facility in Tehran which attract patients from all parts of the country who are reffered here for hydatid surgery. In this descriptive study, demographic information (sex, age, occupation) about patients who underwent hydatid cyst surgeries during 2001-2004 in Tehran Milad Hospital were collected from hospital files and analyzed.

RESULTS

A total of seventy eight patients 34 (43.5%) male and 44 (56.5%) female were enrolled in this study. Majority of the patients 31.5% were in the group of 32-40 years.(Table-I) Liver was the most common organ invovled i.e (69.23%). The involvment of other organs was lung (11.53%), spleen (7.69%), abdomen (3.84%), spinal cord (2.56%), under diaphragm (1.28%), peritoneum (1.28%), kidney (1.28%) and pancreas (1.28%) (Table-II).

Table-I: Age of patients infected with hydatid cyst

Age	*Number of patients*
14-22	11
23-31	8
32-40	17
41-49	11
50-58	14
59-67	4
68-76	13

Table-II: Involvement of different organ (n=78)

Affected organ	*Number of patients*	*(%)*	*Males*	*Females*
Liver	54	(69.23)	20	34
Lung	9	(11.53)	5	4
Spleen	6	(7.69)	4	2
Abdomen	3	(3.84)	2	1
Spinal cord	2	(2.56)	1	1
Under diaphragm	1	(1.28)	1	-
Peritoneum	1	(1.28)	1	-
Kidney	1	(1.28)	-	1
Pancreas	1	(1.28)	-	1

DISCUSSION

Hydatid disease is a medical and public health problem, especially in endemic parts of the world. The transmission of the disease mostly depends on the close relationship between human beings and canine carnivores. Humans are intermediate hosts and are being exposed to the parasite by fecal-oral and hand-to- mouth spread ways.[1] Iran is an important endemic focus of cystic hydatid disease.[2] Investigations on echinococcosis, which have been performed in this country showed the presence of infection among human.[14-19] According to the result of this study, females were found more infected with hydatid cysts than males. Different organs are involved with cyst, however, liver is the most affected organ. During a study carried out by Fattahi et al. between 1991-1997.[20] In Markazi province women had more hydatid surgeries than men and the most affected organ was liver. Nilforoushan et al[21] In Isfahan and Moradi & Majidpoor[22] in Kordestan reported similar results. However, Adibpoor et al.[23] in Tabriz found more hydatid surgeries in men than women and lung was the most affected organ. In conclusion, echinococcosis is still an important health problem in Iran that needs further studies. Therefore, accurate information on the distribution of the disease is first step for the control and prevention. Moreover, it is necessary that in each province the role of different intermediate hosts and the strains of *E .granulosus* in human and animals be investigated.

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