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Epidomology Of Cystice Chinococcosis Among Human In Al Najaf Province.

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ABSTRACT

Hydatid cysts among human that caused by larval stage of the parasite *Echinococcus granulosis* , consider one of important risky parasitic and zoonotic disease. From many hundred of patients those attending hospitals to exclude the infection with hydatid cysts , 139 patient were found infected according to altrasonic rays technique. In concern to sex , males show high infection (90 , 64.8%) comparison to females (49 , 35.2%) . The relationship between infection and category, exhibited that category 40-51 years was the most infected with the disease (43 , 30.9%) , while no infection were found in the category less than 10 years . Also rate of infection show high significant difference ($P < 0.01$) between rural patient (100, 71.9%) an urban (39, 28.1%) . The result shoe that favorite site of infection with parasite were liver and lungs (27.3% , 25.1% respectively) and only one patient show infection with hydatid cysts in the bone . All the collected cysts were examind to detect the viability, 74 cysts (53.2%) were fertile, 49 cysts (35.3%) sterile while the calcified and under developed cyst were 7.9% and 3.6% respectively.

Keywords: epidemiology, cystic, echinococcosis, patients, Iraq

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INTRODUCTION

Cystic echinococcosis is one of risky problems for public health and economic losses in many areas of the world(1) . This disease is one of important parasitic zoonotic disease and more than million people are affected with echinococciosis at any one time (2,3,4) . The symptoms of the infection remain hidden for many years depending on the site of infection and size of the hydatid cysts (5) .

Hydatid cysts is important endemic disease in the north , middle and south of Iraq among both human and animals , in Basrah (5) found high infection among human in rural and urban habitants (35.5% , 19% respectively) . In Sulaimanyia and Erbil governorates (6,7) were found high infection among sheep (7.5% , 11.1% respectively) , cattle (1.7 , 7.77% respectively) , goats (2.8% , 1.66% respectively) , while rate of infection among human was 3.7% and 0.84% respectively . in the middle of Iraq (9) found that 60 patients were infected and most of the infection was found in liver and lungs (73.56% and 20% respectively) .

The present study aimed to throw light on the epidemiological aspect of cystic echinococcosis among patients in Al-Najaf province .

MATERIALS AND METHODS

The study carried out from August , 2017 to March 2018 , on 139 patient whom went through surgical operations in Al-Sadar Medical city , Al-Hakim and Al-Hydryia hospitals . the isolated hydatid cysts were collected and transferred in covered plastic containers to the laboratory .

Thirty ml of hydatid fluid was Aspirated directly from the cysts and put in covered plastic tubes , viability was measured according to (10) . The cysts were characterized fertile when protoscoleces look like white dots on the germinal epithelium . Statistical Analysis : Data analyzed by using chi-squre (X2) (11).

RESULT AND DISCUSSION

The result of this study show that hydatid cysts among human still represent abig problem for the public heath and from many hundreds of patients attending hospitals to exclude infection with the disease , 139 patients found infected , whom all went on surgical treatment . The high prevalence of hydatid cysts among patients may be related to poor sanitation , obscence of heath awareness and role of thousand of stray dogs (final host) that contaminated human and animals environment . our result in agreement with many studies (4,6,7,8,9,12) that recorded high infection with parasite in many countries of the world . In concern to sex , males found more infected than females (64.8% and 35.2% respectively) . Infection in males show significant differences than females on level of p>0.05 (Table – 1) and this may be attributed to that males were more exposure to the contaminated environments with ova of the pavasite than females , especially in ruralregions . previous studies (4,9) come agree with our result .

Table 1 : prevalence of cystic echinococcosis among human according to sex .

Sex	No. of infected patients	%
Males	90	64.8*
Females	49	35.2
Total	139	100%

*p<0.05

The relationship between infection and category , show that age 40-51 years exhibited high infection (30.9%) followed by 21-30 years (25.2%) , while no infection recorded in age less than 10 years . (Table – 2) . this result may be because age 21-50 years represented the working category of people , especially in rural regions that increase chance of exposure infection , again we come agree with studies (3,13) that exhibited high infection among the category 20-55 years

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Table 2 : Prevalence of cystic echinococcosis among human according to age .

Age/years	No. of infected patients	%
<10	Zero	Zero
11-20	12	8.6
21-30	35	25.1
31-40	22	15.8
41-50	43	30.9
51-60	20	14.3
61-70	7	5 NS
Total	139	100%

NS : none significance .

According to habitant , patients from rural provinces found much more infected (100 , 71.9%) than those from urban (39,28.1%) on significant differences was P<0.01 and this may be due to many reasons , such as bad sanitation , present of infected strays dogs in high number and consumption of contaminated vegetables with ova of the parasite with out good washing . All the previous researches (4,9,12) displayed high rate of the disease among the rural individuals comparison to those from urban . (Table – 3)

Table 3: Prevalence of cystic echinococcosis among human according to social status .

Habitant	No. of infected patients	%
Urban	39	28.1
Rural	100	71.9**
Total	139	100%

** P<0.01

Most of the studies carried out on hydatidosis in human(9,12,13) for last years agreed that liver and lungs consider the best sites for the disease , our result ensure the above findings , and again liver (27.3%) and lungs (25.2%) was most favorite site for the parasite . (Table – 4)

Table 4 : Prevalence of cystic echinococcosis among human according to site of cysts .

Site of cyst	No. of infected patients	%
Liver	38	27.3
Lungs	35	25.2
Kidney	25	18
Ovary	22	15.8
Spleen	18	13
Bone	1	0.7NS
Total	139	100%

NS : No significant .

In concern to vaiability of cysts , 74 (53.2%) was fertile , while other cysts was sterile and calcified (Table – 5) . This finding in agreement with other researchers (9,12) found that most of the isolated cysts were fertile .

Table 5 : Prevalence of echinococcosis among human according to type of cyst .

Species	No. of cysts	No. fertile	No. sterile	No. calcified	No. underdeveloped
Human isolated	139	*74(53.2%)	49(35.3%)	11(8%)	5(3.6%)

*P<0.05 .

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