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Incidence of Hydatid Ccyst in Liver Surgery, Recurrence Rate within 5 years, Role of Albendazole in its Treatments

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Abstract

Hydatid cyst, caused by *Echinoc occusgr anulosus* of *larval stages,* is a zoonotic parasitic disease through public health importance. In Iraq, The disease is endemic. A study directed a in AL-Hussein Teaching Hospital- AL- Nassiryiacity –ThiQar governorate.-Iraq to find the rate of liver surgical procedures that accomplished for hydatid cyst removal alsoto explore the population demography ,who experiencing hospital hepatic hydatid cyst surgery. A study was lead of records of 482 patients who submit to liver surgery from April 2015 to March 2020 246 male patients and 236 females. We originate, 223 (46.2%) diagnoses of hydatid cyst were proved. 84 cases (37.6%) have hydatid cyst less than 5 cm in size, Liver hydatid infection confirmed a significant age-related difference ($p < 0.05$). Cysts were found in 132males from 246 (53.6%) and 91 from 236 females (38.5%). There was a important relationship between sex and infection with the proportion of hydatid cysts in males. In the five investigated years, about46.2% of liver surgeries conducted at AL-Hussein Teaching Hospital were correlated to liver in hydatidosis.11 patients 4.9% experiencing relapse rate within 5 years , where they were 2.3% male (5 patients only) while in female 2.6%(6 patients) .Increasing public consciousness of principles of evading infection could decrease the risk of more than one four of surgeries for liver and also minimize costs related with the hydatid cysts treatment. In Alchebayesh, there were a high incidence of infection 34.9% and least in shatra 4.9%. 38 cases (45.2%) from 84 cases with hydatid cyst less than 5 cm in size were calcified by treatments of albendazole treatments as 15 mg per kg per day in 2 divided dosage.

Keywords: Albendazole,Hydatid cyst, , liver surgery,

Introductions

Human infection with hydatid cyst occurs via eating of food or water that contaminated with *Echinococcusgranulosus* eggs or by ingesting eggs picked up by direct contact with dogs infected with *E. granulosus*. Hydatidosis as a parasitic disease is an significant issue not for humans only but also and domestic livestock of Iraq and is characterized as a neglected disease by the World Health Organization (Da Silva, 2010; Deplazes et al., 2017). It is broad-based, particularly in sheep spread and proliferation most of Asia regions of, South America, Australia, and Southern Europe (Deplazes et al., 2017; Mastrandrea et al., 2012).In Iraq, Hydatid cyst infection is endemic and reported in all provinces at a prevalence rate of 1% of surgeries .

Diagnosis of hydatid cyst is based on serological with direct hemagglutination & imaging methods, immune-electrophoresis latex agglutination, , and ELISA (Hernandez-Gonzalez et al., 2018),in final stages in humans, surgery is the only reliable treatment for the disease. Pezeshki et al. (2007) . We showed a cross-sectional study of the liver surgery records of AL-Hussein Teaching Hospital to decide the proportion of the surgical procedures that were performed for removal of hydatid cyst. A

subordinateaim was to investigate the data with demographic respect for the infected patients aspects includingage, gender, residence place &site of surgery.

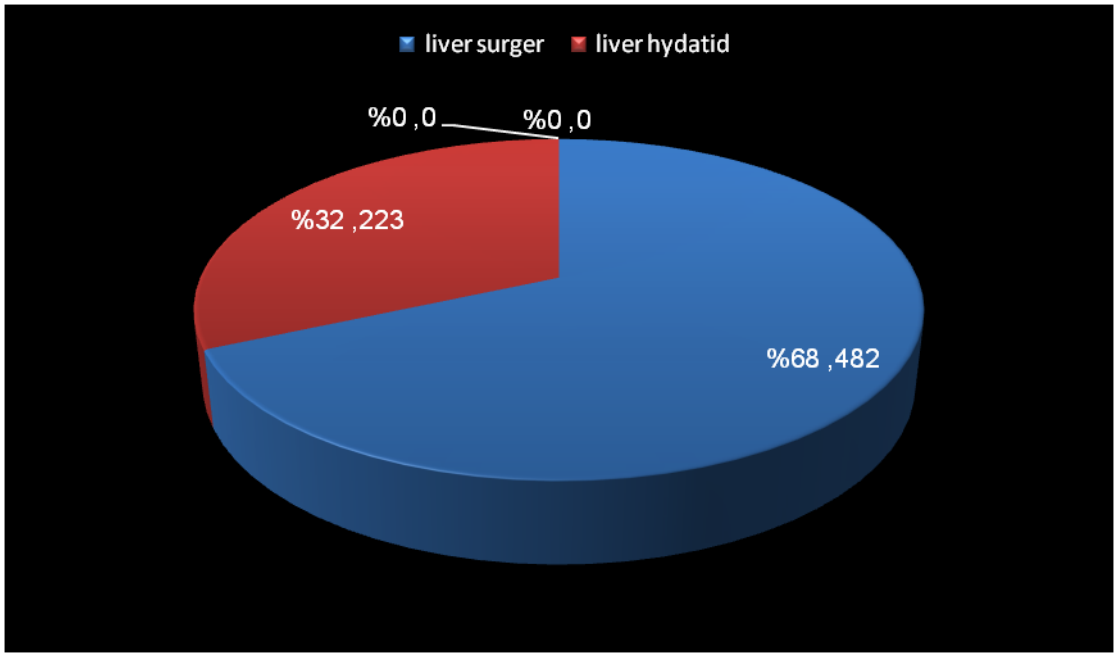
Methods and Materials

Adescriptive study recruite of 482 patients with liver surgery from April 2015 through March 2020. Male gender was of two hinderedforty six were while 236 were female. Age reached from 12 to more than 75 years (mean 46.5 ± 12.5). 223 patients were diagnosed as hydatid liver disease 132 males and 91 females ,The mean age for liver surgery was 46.5 ± 14.1. The age range 36–45 years was most communal in liver surgeries .

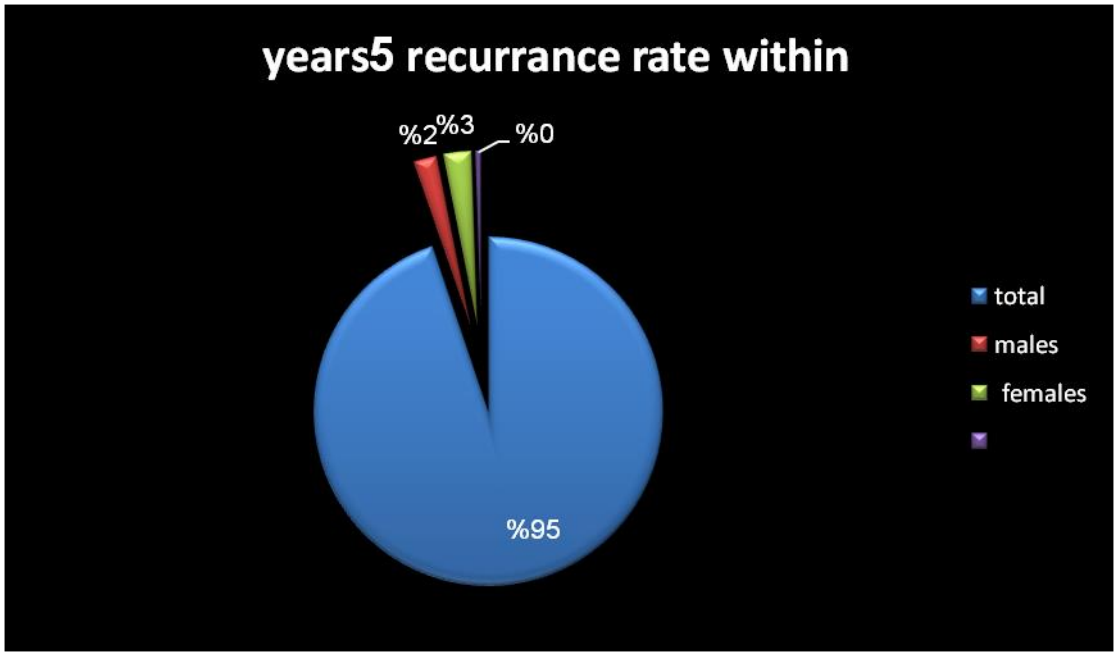
Table 1 Age Distribution of Liver Surgery Patients Ashydatid Cyst Removal 2015–2020.

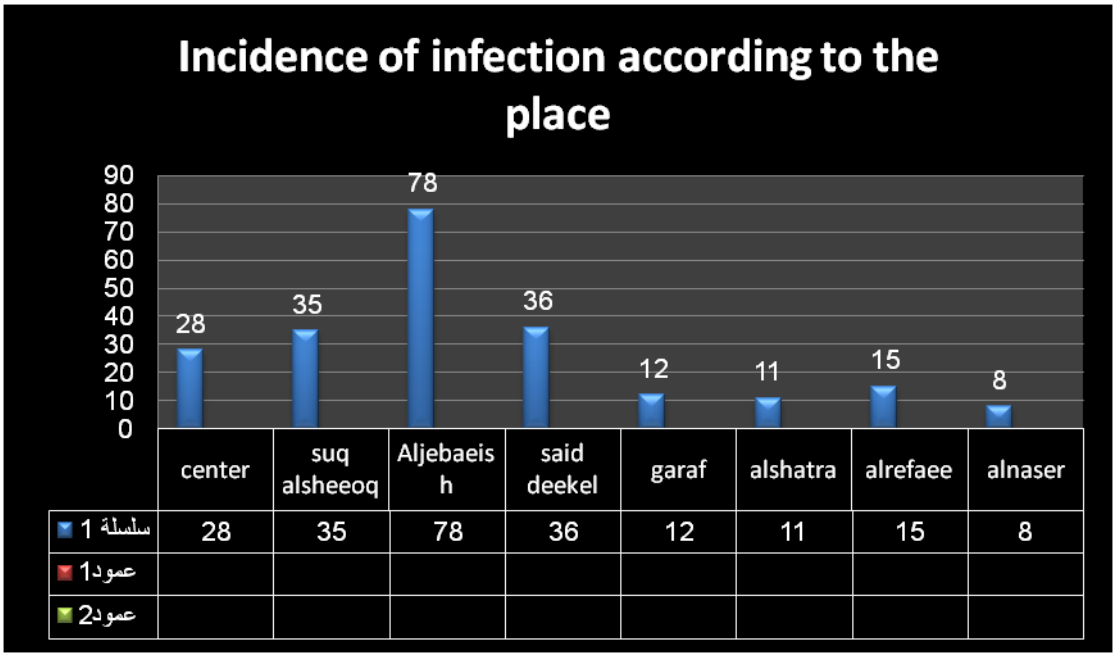
Age Years	liver Surgery	liver Hydatid
<15	20(0.7%)	11(1.8%)
16—25	64(18.2%)	35(12.7%)
26—35	99 (17.3%)	36(15.4%)
36—45	46(11.1%)	51(29.9%)
46—55	98(17.1%)	32(12.8%)
56---65	63(17.6%)	31(19.9%)
66---75	68(11.9%)	15(5.7%)
>75	24(3.5%)	12(2.8%)
Total	482 (100%)	223(100%)

Out of 482 case of liver surgery 223 were diagnosed as hydatid disease



Recurrence rate in males 2,3% while in female 2.6%





Results

Four hundred eighty two patients under wenthepatic surgery of, 223 (46.3%) were liver hydatid cyst, 132 (53.6%) were males and 91 patients (38.5%) were females. Age mean of hydatidosis patients was 46.5 ± 12.3 years. Liver hydatid cyst increased with age to its highest prevalence in the 36-45-year group and demonstrated a significant age-related difference with the lowest number of cases in the less than 15age and more than75-year group. Liver hydatid disease were greater in males in our study, the recurrent rate within 5 years about 11 cases (4.9%) male 5 cases (2.2%) while 6 female cases (2.7%).most common place of infection in our governorate was in al shebaeish 34.9%. 84 cases out of 223 have a cyst less than 5 cm in size those used albendazloe treatments with 15 mg per kg per day in divided dosage for 3 months interval one week rest for liver function test, 38 cases 45.2% were responsed to treatment and the cyst became calcified.

Discussion

current study revealed that hydatid cyst was the cause for approximatelya half of surgeries of liver at the study period. In our governorate, this high incidence of hydatid disease revenues the disease is a endemic and that is due to of high percentage of population in a rural area living and use an animals in their houses asdogs or a sheep. The proportion of liver surgeries conducted for hydatid cyst removal was high, consistent with reported results in Iraq (Abdulhameed et al., 2018), . This appears due to the role of liver as central to the system that offers initial filtering of ingested ova from the blood (McManus et al., 2003). We found the peak occurrence of liver hydatid cyst surgery in patients 36–45 years, similar to explanations in New Zealand (Burridge et al., 1977). The highest rate of liver hydatid cyst was reported to be in the age range of 44–54 and 70–79 years in Tasmania (Thompson and McManus, 2002).

The highest incidencein Yemen, was seen in individuals younger than 20 years old, the lowest showed age range of 41–60 years (Al-Shaibani et al., 2015). Generally As hydatid cyst growth is one to five centimeters/year or may continue unchanged for years (McManus et al., 2003; Siracusano et al., 2009), duration of infection is the principle reason for these differences. An association of sex was observed in our study male affected more than female 59,1 % and 40,9% respectively, , whereas previous reports from Iran (Kamali et al., 2018) and Italy (Cappello et al., 2013) Jordan (Amr et al., 1994; Kamhawi, 1995), Austria (Schneider et al., 2010), Sudan (Omer et al., 2010), and Yemen (Al-Hureibi et al., 1992). Overall, hydatid cyst is more dominant in females compared to males is reverse . The differences could be the result of the lifestyle of men, who may be more in direct contact with a source of infection, such as vegetables and soil contaminated with eggs of *E. granulosus* (Rao et al., 2012).In our study, There were a 4.9% of recurrence cases occur more in females the cause where un known need further fallow up . patients with a cyst less than 5 cm in size start with albenadazole treatments and 15 mg per kg per day in divided dosage for 3 months with precaution about liver enzyme.

Conclusions

Through the five-year study periodin alnassiryia Hospitals , nearly 46.% of liver surgeries were related to hydatidosis. A health education program to increase responsiveness of how hydatidosis is transmitted, with regular anthelminthic treatment of dogs, help to reduce infection rates and the need for surgical intervention with its related costs and risk.

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