

Original Research Article

Clinical presentation of hydatid cyst of liver: descriptive study

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ABSTRACT

Background: The hydatid cyst is unique and localized in the right lobe of the liver in 65%. The most frequent extrahepatic locations are the lungs, the spleen and the peritoneum. Liver (55-70%) is the obvious first site after entry through the gut and passage in the portal circulation. Most cysts tend to be located in the right lobe.

Methods: Thirty patients presenting with varying gastrointestinal symptoms and signs, and symptoms of space occupying lesions of liver like obstructive jaundice, mass per abdomen, patients with complications due to rupture of hydatid cyst formed the study subjects.

Results: The most common presenting complaint was pain abdomen (90%) followed by mass abdomen (30%). Prodromal symptom was present in 50% of patients. Jaundice was present in 3.3% of patients.

Conclusions: The most common age group affected was 25 - 29 years (50%) followed by 35 - 39 years (46.7%).

Keywords: *Echinococcus granulosus*, Hydatid cyst, Jaundice

INTRODUCTION

Hydatid disease in people is mainly caused by infection with the larval stage of the dog tapeworm *Echinococcus granulosus*. It is an important pathogenic, zoonotic and parasitic infection (acquired from animals) of humans, following ingestion of tapeworm eggs excreted in the faeces of infected dogs. Hydatid disease is a major endemic health problem in certain areas of the world.¹⁻³

The hydatid cyst is unique and localized in the right lobe of the liver in 65%. The most frequent extrahepatic locations are the lungs, the spleen and the peritoneum. Liver (55-70%) is the obvious first site after entry through the gut and passage in the portal circulation. Most cysts tend to be located in the right lobe. As the cysts enlarge local pressure causes a mass effect on surrounding tissue producing commensurate symptoms and signs. These may be generalized with upper abdominal pain and discomfort or more specific. Such as; obstructive jaundice. Biliary rupture may occur through a

small fissure or bile duct fistula. A wide perforation allows the access of hydatid membranes to the main biliary ducts, which can cause symptoms simulating choledocholithiasis. Alternatively, it may produce a picture very similar to ascending cholangitis with fever, pain and jaundice.

After infection with *Echinococcus granulosus*, humans are usually asymptomatic for a long time. The growth of the cyst in the liver is variable, ranging from 1 mm to 5 mm in diameter per year. Most primary infections consist of a single cyst, but up to 20% - 40% of infected people have multiple cysts. The symptoms depend not only on the size and number of cysts, but also on the mass effect within the organ and upon surrounding structures.⁴

Surgery remains the gold standard treatment for hydatid liver disease. The aim of surgical intervention is to inactivate the parasite, to evacuate the cyst along with resection of the germinal layer, to prevent peritoneal spillage of scolices and to obliterate the residual cavity. It

can be performed successfully in up to 90% of patients if a cyst does not have a risky localization. However, surgery may be impractical in patients with multiple cysts localized in several organs and if surgical facilities are inadequate.

METHODS

Descriptive case series study was done at the Department of Surgery. Total 30 cases of hydatid cyst of liver were studied. The patients attended surgical OPD and got admitted with hydatid cyst of liver during the study period.

Inclusion criteria

- Patients presenting with varying gastrointestinal symptoms and signs
- Symptoms of space occupying lesions of liver like obstructive jaundice, mass per abdomen
- Patients with complications due to rupture of hydatid cyst.

Exclusion criteria

- Extra hepatic hydatid cyst
- Advanced complications where diagnosis was difficult.

RESULTS

Table 1: Distribution based on age.

Age group	Frequency	Percentage
25 - 29 years	15	50.0
30 - 34 years	01	03.3
35 - 39 years	14	46.7
Total	30	100.0

The most common age group affected was 25 - 29 years (50%) followed by 35 - 39 years (46.7%). Only 3.3% of study subjects were found in age group of 30 - 34 years. The age of patients range from 25 years to 40 years.

Table 2: Distribution based on chief complaints.

Chief complaints	Frequency	Percentage
Pain abdomen	27	90.0
Prodromal symptoms	15	50.0
Mass abdomen	9	30.0
Jaundice	1	3.3
Others	8	26.7

The most common presenting complaint was pain abdomen (90%) followed by mass abdomen (30%). Prodromal symptoms was present in 50% of patients. Jaundice was present in 3.3% of patients.

Tenderness was present in 83.3% of patients. Hepatomegaly was present in 33.3%. Icterus was absent in all patients.

Table 3: Distribution based on clinical findings.

Clinical findings	Frequency	Percentage
Icterus	00	00
Tenderness	25	83.3
Hepatomegaly	10	33.3
Others	12	40.0

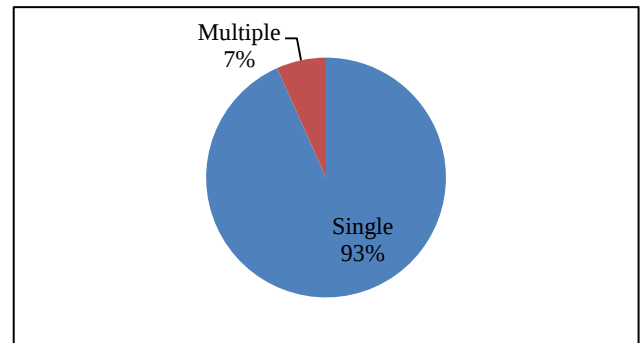


Figure 1: Number of cysts.

Ultrasonography was done to study the features of cyst; USG revealed that among all study subjects, 93% had single cyst and only 7% had multiple cysts.

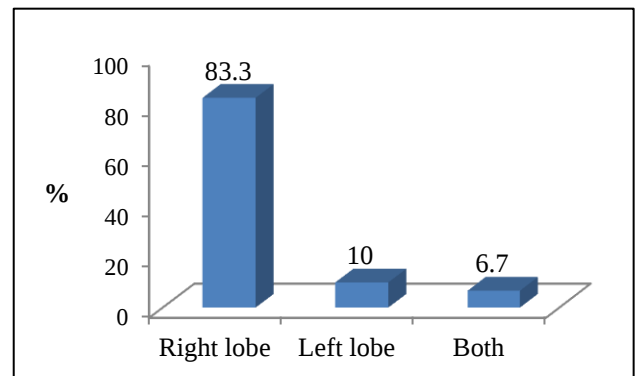


Figure 2: Involvement of lobes.

It was observed that, among total study subjects, among 83.3% of patients, right lobe was affected and among 10% of patients, left lobe was affected. Both lobes of the liver were affected in 6.7% of patients.

DISCUSSION

In the present study, the most common age group affected was 25 - 29 years (50%) followed by 35 - 39 years (46.7%). This finding was observed in all the other similar studies done by various research workers.⁵⁻⁷ There were some contrast results in other studies, which stated that, it may be anywhere between 2nd to 6th decades.⁸⁻¹⁰ This might be attributed to the chronicity and non-

specific (asymptomatic) presentation of the disease in majority of cases.

In relation to the sex, males constituted 46.7% and females 53.3% which was a similar observation in the majority of studies performed in relation to hydatid disease.¹¹⁻¹³ Some studies showed a minimal confliction regarding sex distribution, where female preponderance was observed. The distribution of sex was compared with various national and international studies from different parts of the world. Thus, a varied and diverse picture was obtained.

Pain abdomen was the primary complaint in hepatic disease. The present study correlated with study done by Rukmangadha et al, to some extent regarding clinical presentation of hydatid disease in common sites.¹⁴ Some other general signs were examined in accordance with the site of involvement and general condition of the patient. Hepatomegaly was observed in 33.3% of cases. A similar observation was done by Akther et al.¹⁵

CONCLUSION

The most common presenting complaint was pain abdomen (90%) followed by mass abdomen (30%). Prodromal symptom was present in 50% of patients. Jaundice was present in 3.3% of patients.

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Conflict of interest: None declared

Ethical approval: The study was approved by the institutional ethics committee

REFERENCES

1. Moro P, Schantz PM. Echinococcosis: a review. Int J Infectious Dis. 2009;13:125-33.
2. Nunnari G, Pinzone MR, Gruttadauria S. Hepatic echinococcosis: clinical and therapeutic aspects. World J Gastroenterol. 2012;18(13):1448-58.
3. Khanfar N. Hydatid disease: a review and update. Current Anaesthesia Critical Care. 2004;15:173-83.
4. Zhang W, Jun Li, Donald P, Manus M. Concepts in Immunology and diagnosis of hydatid disease. Clinical Microbiology Reviews. 2003;16(1):18-36.
5. Daoud KT, Schwabe CW. Epidemiology of echinococcus in the middle east a study of hydatid disease patients from the city of Beirut. Am J Trop Med Hyg. 1964;13:681-5.
6. Jahed AK, Fardin R, Farzad A. Hydatid disease in children and youths in Mosul. Annals Tropical Med Parasitology. 1975;182:541-6.
7. Jeboori TI. Hydatid disease; a study of the records of the medical city. 1976;18:65-75.
8. Mahmoud SS. Studies on hydatid disease in Mosul city Iraq. University of Mosul. Thesis; 1980.
9. Hassoun AS, Salihi M. Views on the epidemiology and control of hydatid disease in Iraq. Iraqi Med J. 1973;21:39-51.
10. Tawfig HS. Hydatid disease in Iraq. Bull Endem Dis Baghdad. 1987;28:67-73.
11. Magath TB. Hydatid diseases in North America. Pennsylvania Med J. 1941;44:813.
12. Kelly TD, Izzi N. Pulmonary hydatid disease in Iraq. J Fac Med Baghdad. 1959;1:115-40.
13. Torgerson PR, Karaeva RR, Corkeri N, Abdyjaparov TA, Kuttubaev OT, Shaikenov BS. Human cystic echinococcosis in Kyrgyzstan: an epidemiological study. Acta Trop. 2003;85(1):51-61.
14. Rukmangadha N, Chowhan AK, Sreedhar KV, Patnayak R, Phaneendra R, Kumaraswamy MR. Hydatid cyst - different organ involvement: a prospective and retrospective study. Bioscan. 2010;5(2):231-4.
15. Akther J, Khanam N, Rao S. Clinico epidemiological profile of hydatid diseases in central India, a retrospective and prospective study. Int J Biol Med Res. 2011;2(3):603-6.

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