

Hepatic hydatid cyst – Incidence and prevalence

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Abstract

This is a prospective, single centered based observational study of 30 patients with hydatid cyst of liver included the patients admitted in the Department of General Surgery In M.G.M Medical College and L.S.K Hospital located in Kishanganj, Bihar. This study was carried out in a period between August 2014 to September 2016. Patient of all ages and both sexes are included in this study. Proper Informed consent was taken from every patient those who were included in this study. All patients of either sex, male or female admitted with the diagnosis of hepatic hydatid cyst were included in this study excepting patients diagnosed with non-parasitic cystic disease of liver e.g. 1. Simple cyst, 2. Amoebic liver abscess, 3. Pyogenic liver abscess and other space occupying lesions. At the end of the study the following conclusions were drawn 1) 2/3rd of the patients presented in 3rd – 4th decades of life. 2) There was a slight male preponderance, the male to female ratio is 1.3 : 1 3) Hepatomegaly was present in 70% of patient. 4) ELISA for Echinococcal antibody, performed in all cases. 5) Majority of patients were treated surgically and with preoperative treatment with Albendazole for 2-4 wks. and followed by post-operative chemotherapy to reduce the chances of recurrences (in case of operative spillage or missed small / daughter cyst). All patients were received Albendazole 3 weeks before the procedure and to prevent anaphylactic shock, all the necessary medicines (inj hydrocortisone, inj Phenergan, inj adr. etc.) were kept ready at operation theatre. No intralesional scolical agents were used – only the scolical agents were used perilesionally. 6) The right lobe of liver is involved in almost > 2/3rd of the cases, while isolated left lobe involvement was not seen in this study. Both lobes involvement were seen in 1/3rd of cases, hence correlating with published literatures. 7) Solitary hydatid cyst in liver was present in 1/3rd of cases and multiple cysts were found in 2/3rd of cases and some had cystobiliary communications. 8) So, for symptomatic hydatid cyst of liver, open surgical method is the best modality of management. And in this study out of 30 patients 29 recovered well and due to associated comorbidities 1 patient was not operated, who was managed conservatively.

Keywords:

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INTRODUCTION

Hydatid disease is a parasitic infestation by a tape worm of the genus echinococcus. The larval form of cestode, *Echinococcus granulosus*, manifesting as cyst located mainly though not exclusively, in the liver (up to 80%) is the cause of disease in the mankind. *Echinococcus* can

involve any organ, but liver is the most common organ followed by the lungs. HYDATID disease or echinococcosis, caused by the larval form of *Echinococcus granulosus*, has a worldwide distribution and is endemic in many countries in the Mediterranean region, the Middle and Far East, and South America.¹. The incidence in our country is also very high. Echinococcosis is among the most neglected parasitic disease. Diagnosis is often delayed, as many hydatid cysts may remain asymptomatic even in advanced stage. Humans contract the disease from dogs but there is no human to human transmission². Up to thousands of ova are produced daily and deposited in dog's feces. The infected ova containing feces of dog contaminate grass and farmland and the ova are ingested by sheep, pigs and humans. The ova have chitinous envelope that are dissolved by gastric juice. The liberated ova burrows through the intestinal mucosa and is carried by portal vein

to liver. A few ova pass through the liver and enter the systemic circulation forming cysts in lung, spleen, brain or bones³. Uncomplicated hydatid cysts are usually asymptomatic. Symptoms are produced by 2 mechanisms: a generalized toxic reaction due to the presence of the parasite itself and local or mechanical symptoms depending on the location of the cyst.⁴ The mechanical symptoms also depend on the size and number of the cysts. In more than 40% of cases, the complications precede the diagnosis of the disease. Rupture, secondary infection, and suppuration are the most common complications.⁵ Although medical treatment with mebendazole⁶ or albendazole⁷ has been reported to be effective in some cases, little objective evidence is available to support these claims. Treatment of hydatid disease consists either of surgery or percutaneous drainage. A variety of surgical procedures have been described,^{4,8} Surgical procedures involve.(a)introduction of scollicidal agents.(b)open cyst evacuation.(c)laparoscopic cyst evacuation.(d)pericystectomy.(e)liver resection/transplantation.⁹ The present study was done to evaluate the incidence , prevalence , management and its complication of the patients having hepatic hydatids.

MATERIALS AND METHODS

This study is a single hospital based prospective observational study conducted in Department of surgery, M.G.M Medical College and L.S.K Hospital, Kishanganj. This study is approved by the Institutional Ethical Committee of the Hospital. The study population comprised of villagers residing in the district of Kishanganj and nearby seeking medical attention at the M.G.M Medical College and L.S.K Hospital, Kishanganj. Patients who were diagnosed with hepatic hydatids were included in the study. Proper Informed consent was taken from every patient included in this study

Exclusion Criteria

Patient present with non-parasitic cystic disease of liver e.g.

1. Simple cyst,
2. Amoebic liver abscess,
3. Pyogenic liver abscess and other space occupying lesions.

A sample size of 30 was taken for the study. This included patients of all age and sex. The most common complaints were pain in the right upper quadrant and epigastrium and abdominal mass which were present in 73% and 53% of the cases respectively. The clinical presentations are summarized in Fig.1.

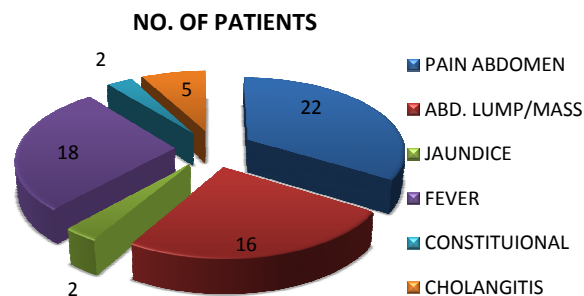


Figure 1:

ELISA for Echinococcal antibody, performed in all cases. 29 patients were treated surgically and with preoperative treatment with Albendazole for 2-4 wks. and followed by post-operative chemotherapy to reduce the chances of recurrences (in case of operative spillage or missed small / daughter cyst). All patients were received Albendazole 3 weeks before the procedure and to prevent anaphylactic shock, all the necessary medicines (Inj hydrocortisone, inj Phenergan, inj adr. etc.) were kept ready at operation. theatre. No intralesional scollicidal agents were used – only the scollicidal agents were used perilesionally. The scollicidal agents most commonly used are combination of 0.5 % Cetrimide and 0.05 % of chlorhexidine (SAVLON)TM. In this study out of 30 patients 29 recovered well and due to associated comorbidities 1 patient was not operated, who was managed conservatively. Surgeries performed are summarized in fig.2.

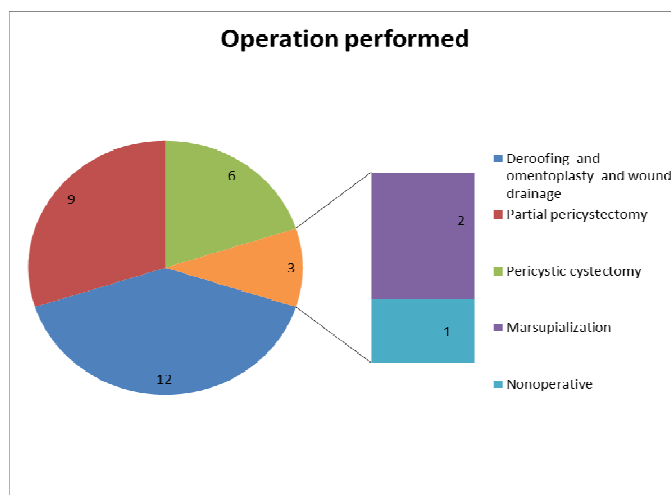


Figure 2:

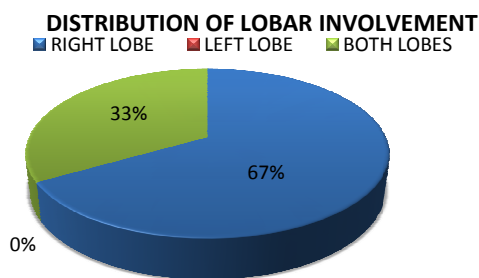
OBSERVATION

Out of the total 30 patients, 17 (57%) were Male patients and 13 (43%) were Female patients. The age of the patients varied between 10 years to above 70 years.

Table 1: Age distribution

Age group	No. Of patients
10 -19 years	1
20 -29 years	4
30 -39 years	7
40 -49 years	12
50- 59 years	5
>70 years	1
Total	30

Hepatomegaly seen in majority of patients and pallor and malnutrition were seen in almost all patients and jaundice seen in one half of patients. The right lobe of liver is involved in almost $> 2/3^{\text{rd}}$ of the cases, while isolated left lobe involvement was not seen in this study. Both lobes involvement were seen in $1/3^{\text{rd}}$ of cases, hence correlating with published literatures. Solitary hydatid cyst in liver was present in $1/3^{\text{rd}}$ of cases and multiple cysts were found in $2/3^{\text{rd}}$ of cases and some had cystobiliary communications. The largest cyst was 14.5x14x11 cm. in right lobe of liver.

**Figure 3:**

Among the operated patients, complications seen were a) retained cyst, b) biliary fistula c) Cholangitis and d) surgical site infection. In this study out of 30 patients 29 recovered well and due to associated comorbidities 1 patient was not operated, who was managed conservatively.

CONCLUSION

1. $2/3^{\text{rd}}$ of the patients presented in 3^{rd} – 4^{th} decades of life.
2. There was a slight male preponderance, the male to female ratio is 1.3 : 1
3. Right upper abdominal pain was the presenting symptoms in 70% of the patients, thus constituting the commonest presenting complaints, and abdominal lump and fever are seen in some patients.
4. Hepatomegaly was present in 70% of patient.
5. Hepatic hydatid is more common involving the right lobe of liver.
6. For hydatid cyst of liver, open surgical method is the best line of management.

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