

A study on clinical profile of patients with hydatid cyst attending tertiary care hospital

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Abstract

In India, majority present with palpable mass and/or hepatomegaly followed by pain abdomen, fever and jaundice and on examination majority have mass abdomen with hepatomegaly, splenomegaly icterus and ascites. By clinical examination a definitive diagnosis of Hydatid cyst cannot be achieved. This prospective study consisted of proven clinical cases of hydatid cyst of liver admitted during the study period. Totally 30 cases were included in the study. Detailed clinical history with regards to age, sex, socioeconomic status, occupation, contact with dog, past H/O of surgery and medical illnesses, clinical symptoms were taken and patient subjected to clinical examination for making a provisional clinical diagnosis. Hepatomegaly in 29 cases was the commonest sign. Predominantly as mass in right hypochondrium (5), mass in epigastrium (10) cases and as such hepatomegaly in 14 cases. Associated medical illness were also seen. They were 2 patients had hypertension, one patient had portal hypertension, systemic hypertension, diabetes and left lower lobe pulmonary hydatid, I patient had pulmonary Kochs and I patient had B/L bronchiectasis, 2 patients had CCF.

Keywords: Hydatid cyst, hepatomegaly, palpable mass

Introduction

Echinococcus Granulosus is wide spread, having cosmopolitan distribution involving both sheep (cattle) grazing and sheep non grazing areas. Increasing migration, high mobility of troops and growing incidence of world travel among all people make Hydatidosis a global problem of increasing importance ^[1].

Echinococcus is endemic in many Mediterranean countries, the Middle and Far East, South America, Australia, Afghanistan, Pakistan, India, South Africa-Kenya (Turkana Tribe), Ethiopia, Uganda, Southeast Asia. Dog is the definitive host for Echinococcus infection. It produces a silent cyclozoonotic infection with adaptability to a variety of host species like sheep, cow, goat, camel, buffalo, swine, horse, etc. introduction of domestic animals like cow, sheep from Europe to other parts of the world have made Hydatid a worldwide problem ^[2].

Incidence of Hydatid disease: Per lakh population in Australia (0.5>/Lakh), 9.3 in Tasmania. 6.1 in Cyprus, 3.8 in Yugoslavia, 143 in Argentina, Tunisia 11-30 Uruguay-20.7 and 198 in Turkana. Radiologic and serologic survey in Libya showed prevalence of 12000/Lakh. Turkana 7700/Lakh, Tunisia 1300/Lakh population [3].

Most of patients will present with symptoms that are in no way diagnostic of hydatid disease. Indeed unless the patient discharges cyst contents in some way, it is unlikely that a firm clinical diagnosis will be made.

In India, majority present with palpable mass and/or hepatomegaly followed by pain abdomen, fever and jaundice and on examination majority have mass abdomen with hepatomegaly, splenomegaly icterus and ascites (Us 1989 April, 187-189). By clinical examination a definitive diagnosis of Hydatid cyst cannot be achieved. It has to be differentiated from pyogenic liver abscess, hepatocellular carcinoma, macronodular cirrhosis, nonparasitic cyst of liver, amoebic liver abscess. Hence with the help of investigations like ultrasound, CT scan serology, hematology, a 100% diagnosis of hydatid cyst can be made [4].

Hemogram-Eosinophilia has been reported in 6-30% of cases of Hydatid. But eosinophilia is nonspecific. Patient may have anaemia when associated with other worm infestation sometimes leucopenia may be seen.

Raised bilirubin levels, raised Alk, phosphatase are SGOT, SGPT, GGT are seen in case of obstructive jaundice caused by hydatid cyst. It may also become abnormal in patients on albendazole therapy, hence to be done at least once in 2 week during the therapy sometimes serum albumin may be low in cases of massive hydatid cyst causing hydatid cachexia.

Methodology

This prospective study consisted of proven clinical cases of hydatid cyst of liver admitted during the study period. Totally 30 cases were included in the study. Detailed clinical history with regards to age, sex, socioeconomic status, occupation, contact with dog, past H/O of surgery and medical illnesses, clinical symptoms were taken and patient subjected to clinical examination for making a provisional clinical diagnosis.

Investigations like complete hemogram, routine urine examination, routine biochemical tests, liver function tests, plain x-ray chest, x-ray abdomen and ultrasound of abdomen were done for all patients to confirm the diagnosis and as a baseline investigation for follow up of patients undergoing surgical and medical treatment. Serologic investigations like casoni's test, indirect hem agglutination test and ELISA were done depending upon the availability of the test at our hospital at the time of admission of patient to the hospital. During ultrasonography, the site, size, echogenecity, echopattern, contents of the cyst, evidence of detachment of laminated membrane, evidence for calcification, transonichalo were seen in detail.

20 patients were treated by surgery and 9 medical therapy depending on the individual cases. In 8 patients of preoperative albendazole therapy for one month was given. Postoperative albendazole therapy was given for one month for all patients undergoing surgery, one patient expired due medical cause without any specific treatment for hydatid cyst of liver. One patient who had intraperitoneal rupture of liver hydatid with CCF had poor risk for surgery and was treated medically. 2 patients had recurrent hydatidosis, one patient treated with surgery and the other patient medically.

Usual indications for surgery were

1. Large cyst with multiple daughter cyst.
2. Symptomatic cysts.
3. Single superficial liver cysts.
4. Infected cysts.

5. Cyst causing pressure effects.

All cases of surgery were done on elective basis. The operative treatment in our series was conservative.

Operative procedure

Exposure of the liver was obtained in 12 cases by right paramedian incision, right subcostal incision of the abdomen the liver was mobilised and adhesions of the cyst divided when found adherent to diaphragm particular care was required during the dissection to avoid entering the pleural cavity. The area around the cyst was then carefully isolated by Gauze packs soaked in a scolicidal agent. Initial cyst aspiration and replacement of using a 3-way or 20ml syringe was done provided the aspirate was not bilious or infected. 20% hypertonic saline in 9 cases, 0.5% cetrimide in 7 cases and 1% povidone iodine in 1 case and was not used in 3 patients. The edges of collapsing cyst wall was held with tissue forceps and cyst opened and a sucker itself was inserted into the cavity to remove the numerous daughter cysts or by using sponge holding forceps. All laminated membrane was removed and the cavity was examined for any biliary ductal communications. Four cases had cystobiliary communication and was sutured with catgut. 9 patients underwent cystectomy procedure. In 11 patients the cyst wall was redundant that part of cyst wall was removed (partial pericystectomy). Residual cavity was managed by simple closure after instillation in 10 cases, in 9 cases tube drainage was done and in 1 cases omentoplasty was done. Abdomen closed with a drain in subhepatic space to provided egress to any bile leak.

Results

Out of 30 cases in the study 17(56.7%) were males and 13(43.3%) were females with M:F ratio of 1:0.87.

Table 1: Shows age and sex distribution

Age	Male	Female	Total%
0-10	1	-	3.30%
11-20	-	-	-
21-30	4	3	23.30%
31-40	3	7	33.30%
41-50	5	5	23.30%
51-60	4	1	16.60%
60-70	-	-	-
Total	17	13	100%

Youngest patient was 8 year old boy and oldest patient was 60 years highest no. of cases occurred in age group of 31-40 years, i.e., 10 cases (33.3%).

Out of 30 cases 16(53.3%) were from Bangalore, 6 patients from rest of Karnataka, 6 patients from Andhra Pradesh and 2 patients from Tamil Nadu.

Occupational Status

House wives-129(40%)

Clerk-3(10%)

Agriculturist-6(20%)

Student-2(6.7%)

Coolie-5(12%)
Magistrate-1(3.3%)

Among 30 cases only 8 patients were literate. Annual income of 20 patients were less than Rs. 10000/years.

Table 2: Clinical symptoms

No. of Patients (%)	No. of patients (%)
Pain abdomen-19(63%)	Gen weakness-3(10%)
Mass abdomen-19(63%)	Dyspepsia-3(10%)
Fever-9(30%)	Loss of weight-2(6.6%)
Pruritus-5(16.7%)	Dyspnea-1(3.3%)
Cough-4(13%)	Chest Pain-1(3.3%)
Jaundice-3(10%)	Asymptomatic-1(3.3%)

Pain abdomen and mass abdomen were the commonest clinical symptoms in our series.

Table 3: Clinical Signs

No. of Patients	No. of patients
Hepatomegaly-29	Palor-7
Splenomegaly-3	Ascites-3
Hydatid thrill-2	Jaundice-3
Multiple lumps-1	Si of pleural effusion-3
Urachal cyst-1	B/L Bronchiectasis-1

Hepatomegaly in 29 cases was the commonest sign. Predominantly as mass in right hypochondrium (5), mass in epigastrium (10) cases and as such hepatomegaly in 14 cases. Associated medical illness were also seen. They were 2 patients had hypertension, one patient had portal hypertension, systemic hypertension, diabetes and left lower lobe pulmonary hydatid, 1 patient had pulmonary kochs and 1 patient had B/L bronchiectasis, 2 patients had CCF.

3 patients had past history of surgery. One patient had undergone surgery for hydatid cyst of liver about 2 year back and presented as multiple lumps in abdomen. One patient had undergone splenectomy 16 years back, for unknown reason, and was HBs Ag+ve. One patient had past H/O hysterectomy and tubectomy. About 15 patients had contact with dog. 8 patients with sheep and 7 patients had no contact with animals.

Discussion

In the present study the maximum number of patients were from Bangalore district and a few from neighbouring districts and neighbouring states. Although the disease not being common in urban part, is seen frequently in surrounding villages. According to department of animal husbandary (1983), Bangalore is one of the district with large population of live stock in Karnataka. Hence the frequency of hydatid disease noted in the study is acceptable ^[5, 6].

Table 4: Age and Sex distribution

Age group (yrs)	Present study	A.K. Tiwary <i>et al.</i> ^[7]	Sayek <i>et al.</i> ^[8]
0-10	3.3%	0	1%
11-20	-	7.10%	18%
21-30	23.30%	11.90%	19%
31-40	33.30%	23.80%	20%

41-50	23.30%	21.40%	24%
51-60	16.60%	11.90%	11%
61-70	-	11.90%	9%
M : F	01:00.9	01:00.4	01:02.2

The above table shows that in our study the highest prevalence was noted in the age group of 31-40 years i.e. 33.3% which is very similar to the study conducted by A/L/ TTWARY *et al.* in Bihar. In the above table it is noted that maximum number of cases were seen in 21-50 years age group in all 3 studies.

Conclusion

- Pain abdomen and mass abdomen were the commonest clinical symptoms in our series.
- Hepatomegaly in 29 cases was the commonest sign. Predominantly as mass in right hypochondrium (5), mass in epigastrium (10) cases and as such hepatomegaly in 14 cases.

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