

Original article:

Clinico-radiological study of hydatid disease at Acharya Vinoba Bhave tertiary care rural hospital

***Dr Priya Singh Kushwah¹, Dr A.T.Kamble²**

¹Department of Surgery, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India

²Department of Surgery, Jawaharlal Nehru Medical College, Wardha, Maharashtra, India

Corresponding author*

Abstract:

Echinococcal (Hydatid) disease has been known from the time of Hippocrates, who described patients with “liver full of water”. Its clinical manifestations concern practically all the medical and surgical specialists but mainly the general surgeons because of the multiplicity and magnitude of the surgical problems so often associated with human echinococcosis. The disease might undertake a ‘malignant’ course in the sense of high rate of recurrence, which further enforces the importance of meticulous evaluation and proper planning of treatment and better preventive methods aiming at control and eradication of this age old disease. Surgery for hydatid disease has always been considered as the gold standard in terms of therapy despite significant advances in medical treatment and intervention radiology. Since hydatid disease is endemic in Vidarbha region, it was the need of the hour to study the natural history and clinical features of the disease and its relation with the radiological findings along with the different modalities of the surgical treatment so that it would enable surgeons to investigate and treat the patients of hydatid disease appropriately. Hence we have decided to study this topic .

Key words: Hydatid disease, clinico-radiological study, ELISA, histopathology.

INTRODUCTION:

Echinococcal (Hydatid) disease has been known from the time of Hippocrates, who described patients with “liver full of water”⁽¹⁾ Hydatid disease is still a major health problem in the infested areas of world, mainly in sheep-raising areas. Foci were also known to exist in India, where highest prevalence is reported in Andhra Pradesh, Tamilnadu and Vidarbha than other parts of country ⁽²⁾.

But owing to increased travel and tourism all over the world, it can be found anywhere, even in developed countries⁽³⁾ It can involve any organ and mimic almost any pathological condition.

Its clinical manifestations concern practically all the medical and surgical specialists but mainly the general surgeons because of the multiplicity and magnitude of the surgical problems so often associated with human echinococcosis³. Clinical features of hepatic hydatid cyst⁴ are asymptomatic in 75% and Symptomatic in 25%. When symptomatic, Barrie Aarons⁵ found that mode of presentation is hepatomegaly, biliary colic, abdominal mass, acute abdomen, jaundice and fever.

The disease might undertake a 'malignant' course in the sense of high rate of recurrence, which further enforces the importance of meticulous evaluation and proper planning of treatment⁶ and better preventive methods aiming at control and eradication of this age old disease. Investigations includes USG, CT scan and X-ray and ELISA, According to **Tiwary et al**⁷ a particular pattern of ultrasonographic picture is very much pathognomonic of hydatid cyst where the mass appeared to be divided into many small round or hexagonal compartment of some density giving a '**soap bubble appearance**'. Computed Tomography CT (Pedrosa I Saiz et al 2000)⁸ has advantages over USG .

Further studies are therefore needed to improve our understanding of the various clinical problems caused by this parasite in general and more specifically to reassess the surgical nature, complications and fatality of this disease in order to apply more appropriate surgical treatment to human echinococcosis.

Surgery for hydatid disease has always been considered as the gold standard in terms of therapy despite significant advances in medical treatment and intervention radiology. various procedures done in our study was marsupialisation, excision of cyst, enucleation and pericystectomy. First is medical line of management with tab albendazole 400mg bd.

Many surgical techniques have been developed through years, each of them aiming to reduce the complications and recurrence. Since hydatid disease is endemic in Vidarbha region, it was the need of the hour to study the natural history and clinical features of the disease and its

relation with the radiological findings along with the different modalities of the surgical treatment so that it would enable surgeons to investigate and treat the patients of hydatid disease appropriately. Hence we have decided to study this topic '**CLINICO-RADIOLOGICAL STUDY OF HYDATID DISEASE AT ACHARYA VINOBA BHAVE TERTIARY CARE RURAL HOSPITAL**'

MATERIAL AND METHODS:

The present study was carried in the Department of General Surgery of J.N. Medical College, Sawangi (Meghe), Wardha , Maharashtra from Apr 2014 to October 2016. The study comprises of 30 cases of hydatid Disease. The prospective series was compared with established trials elsewhere. The cases selected in this work were those of hydatid disease involving any organ of the body. The study design is prospective interventional study.

Inclusion criteria :

-All patients having hydatid disease .

Exclusion criteria:

-Patients other than hydatid disease

After detailed history, complete general and systemic examination, provisional diagnosis of hydatid cyst was done.

Diagnosis was confirmed with the help of various investigations like ultrasonography, CECT scan of abdomen. X ray chest and ELISA was done in all patients.

Surgical Procedures:

Marsupialisation, Excision of cyst, Enucleation, Thoracotomy with Excision.

Medical management-

Tablet albendazole 10mg/kg/ day for 6 months.

Follow up-

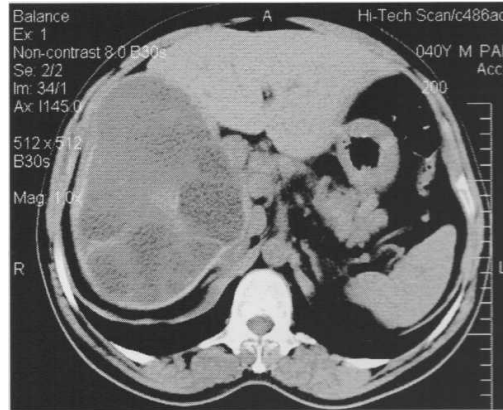
Patients were kept in follow up and during this period, X .ray chest, USG abdomen were done.



Fig 1: Intra operative view showing Hydatid cyst of liver



Figure 2: DAUGHTER CYST



CT IMAGE SHOWING MULTIPLE DAUGHTER CYSTS

OBSERVATION AND RESULT:

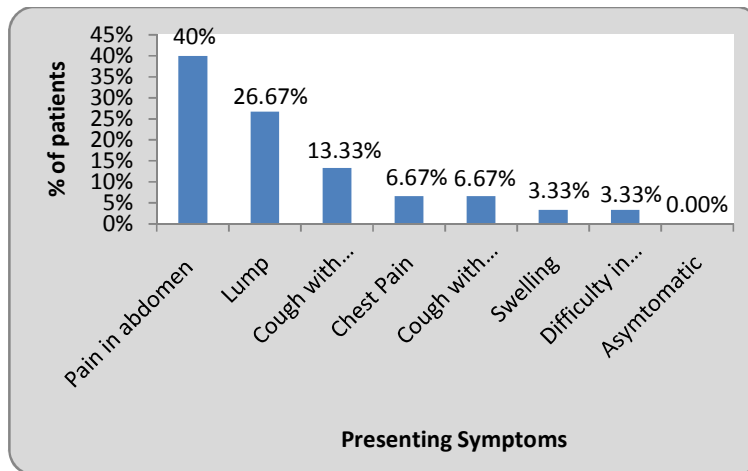
Table 1: Age wise distribution of patients

Age Group(yrs)	No of patients	Percentage(%)
0-10 yrs	3	10
11-20 yrs	3	10
21-30 yrs	7	23.33
31-40 yrs	8	26.67
41-50 yrs	3	10
51-60 yrs	3	10
>60 yrs	3	10
Total	30	100.00
Mean \pm SD	34.63 \pm 17.87(6-70 years)	

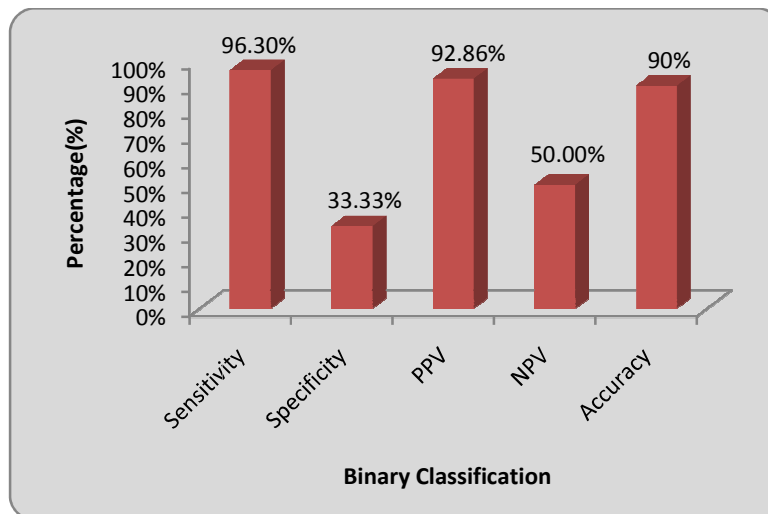
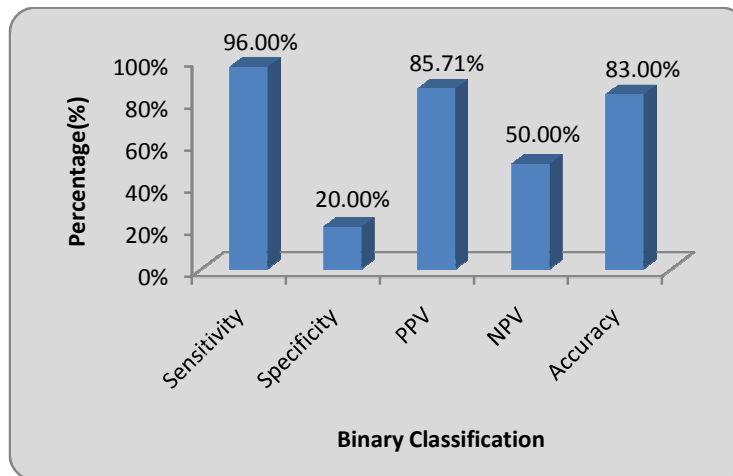
Table 2: Gender wise distribution of patients

Gender	No of patients	Percentage(%)
Male	10	33.33
Female	20	66.67
Total	30	100.00

Graph 1: Distribution of patients according to clinical presentation.



Graph 2: Binary Classification for USG and CT findings in the comparison of histopathological findings



CONCLUSION:

1. Hydatid disease is not an uncommon pathology in central India ; its clinical and imaging features may be so varied that it may mimic any other cystic disease; so it should form the part of the differential diagnosis of all cystic disease anywhere in the body.

2. Liver is the most common intra-abdominal organ affected by hydatid disease , right lobe most commonly involved . secondly most common involved organ is lung.

3. During our study we noticed the female preponderance with maximum number of patients in fourth decade of life, the youngest was a 6 yr female and the oldest being a 71 yr female.

4. The commonest presenting symptom being pain in abdomen which was followed by lump in abdomen. Majority of the patients showed involvement of the right lobe of liver.

5. IgG detecting immunological test was performed in all 30 cases. 23 cases out these showed the presence of specific IgG in their samples while it was absent in 7 cases.

6. Out of 30 patients, 12 patients underwent pericystectomy, 6 underwent excision. 3 patients each underwent marsupialisation and 4 patients underwent enucleation and thoracotomy with excision was done in 5 patients. All 30 patients were given Tab. Albendazole 400mg BD for 15 days preoperatively, which has got the remarkable effect on hydatid cyst recurrence.

7. USG could delineate the cyst morphology with great accuracy also helps in surgical management pre-operatively and post-operatively.

8. Contrast enhanced CT is the investigation of choice for hydatid disease in delineating the site , morphology, extent, number of cysts and complications.

9. CT scan is highly sensitive and specific in comparison with USG.

10. Surgery and radiology go hand in hand, sometimes patient comes with radiological finding in hand before surgeon examines clinically and takes a first hand in addition to radiology as a guiding role.

BIBLIOGRAPHY:

1. Romero-Torres R, Campbell JR. An interpretive review of the surgical treatment of hydatid disease. *Surg Gynecol Obstet.* 1965 Oct; 121(4): 851-864.
2. SK Bobhate et al. Incidence of hydatid disease in Vidarbha division. *Indian J. Surgery;* 1984, 46: 162- 164.
3. C Palanivelu et al. Laparoscopic management of hepatic hydatid disease. *JSLs* 2006; 10: 56-62.
4. Christian KK & Pitt HA. Hepatic abscess & cystic disease of liver. *Maingot's Abdominal Operation*, 11th edition 2007. 28 : 768-774.
5. Aarons BP, Fitzpatrick SC. Hepatobiliary hydatid disease, Kune GA, Sali A (eds): *the practice of Biliary Surgery*, 2nd edition oxford: Blackwell 1980, 399.
6. Saeed Ali Abu-Eshy. Clinical characteristics, diagnosis & surgical management of hydatid cysts. *WAJM;* April-June 2006, 25 (2): 144-152.
7. Tiwary AK and Tiwary RN. *Indian Journal of Surgery.* 1988;An.:42.
8. Pedrosa I, Saiz A, Arrozola J et al. Hydatid disease, Radiological & pathological features & complication. *Radiographics* 2000; 20 (3) :795-817.