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The Study of Hydatid Disease –A Retrospective Study of Last 10 Years In Western Rajasthan India

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Abstract: *Hydatid cyst infection or Echinococcosis is one of the oldest disease known to mankind. It causes not only illness but also productivity loss in human. It may be localized in liver (75%), lungs 10-15% & other organ in the body. Disease develops as slow growing mass in the effected tissues. Clinical symptoms vary according location and stage of the disease. Imaging modalities like USG, CT SCAN & MRI is the main stay of diagnosis. Surgical removal of cysts combined with chemotherapy is most common form of treatment. Alternative options are PAIR and per cutaneous thermal ablation by radiofrequency device. Majority of the patients were agriculture worker 40%, followed by housewives 33%, private worker 16% & student 10%. 63.3% cases of present study had positive history of keeping pet animal. Majority of cases presented with pain abdomen followed by lump abdomen. In present study 66.7% had cyst more than 10cm & 13.3% had cyst more than 5 cm. Majority of cases were managed by excision of cyst (57%) & marsupialization (32%) .*

Keywords: *Echinococcosis , Cysts, PAIR ,Radiofrequency ablation, Lump abdomen, Marsupilization.*

I. Introduction

Hydatid cyst infection or Echinococcosis is one of the oldest disease which causes not only illness but also productivity loss in human. Human Echinococosis is a zoonotic parasitic infection [1]. It is a primary disease of animal that can be transmitted to humans. Human infection varies from 1-14 / 100000 population.Imaging modality is the main method of diagnosis. USG become its easy availability affordability and diagnostic sensitivity is the initial test of choice. Surgical removal of cysts combined with chemotherapy is most common form of treatment

II. Material & Methods

DESIGN: Retrospective study
SETTING: Dr. Sampurnanand Medical College & Associated Hospitals, Jodhpur (Raj.) INDIA
MATERIAL: Cases of Hydatid disease for last 10 years were taken. Recorded were obtained from the record rooms of the Hospitals.
METHODOLOGY: A detailed Study related to age, sex, religion, residence, occupation, clinical presentation, examination finding, investigation, management, morbidity and mortality was done. Details were recorded in Proforma and analysed.

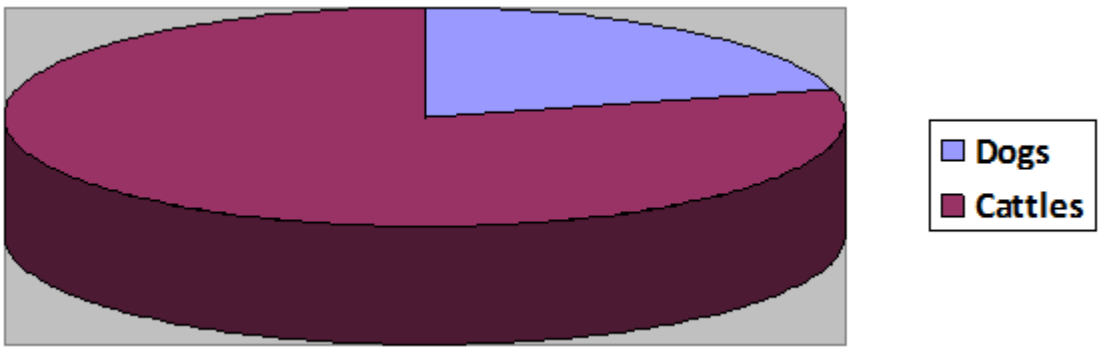

Fig. 1. Type of animals in close vicinity in hydatid disease

Table. I USG findings in Hydatid disease

Distribution of cysts		No. of Cases	Percentage
Site	Rt Lobe liver	19	63.33
	Lt Lobe liver	4	13.33
	Both Lobe	3	10.00
Cyst in other organ	Spleen	1	3.33
	Ovary	1	3.33
	Retroperitoneal	1	3.33
	Pancreas	1	3.33
No. of Cysts	Single	18	60.00
	Double	2	6.67
	Multiple	10	33.33

Table. II Regional distribution of palpable abdominal lump

S.No.	Site	No. of Cases	Percentage
1	Rt. Hypochondrium	17	56.67%
2	Rt. Hypochondrium and Epigastrium	4	13.33%
3	Epigastrium	4	3.33%
4	Lt. Hypochondrium and Epigastrium	1	3.33%
5	Hypochondrium	1	3.33%
6	Hypochondrium & Umbilical	1	3.33%
7	Left hypochondrium and Lt Lumbar region	1	3.33%
8	No Lump	1	3.33%

Table . III USG findings in Hydatid disease

Size of cyst		No. of Cases	Percentage
< 5 cm		4	13.33
5-10 cm		6	20.00
10-15 cm		13	43.33
> 15 cm		7	23.33
Sonographic Appearance of cyst	Unilocular	21	70.00
	Multilocular	9	30.00

III. Observation & Discusion

This retrospective study was performed on patients with hydatid disease admitted in surgical wards of M G Hospital and M D M Hospital in the Department of Surgery affiliated to Dr. S.N. Medical College, Jodhpur (Rajasthan) for last 10 years (2001 - 2010). The incidence of the disease is high in sheep-raising countries like Australia, Brazil, South Africa and panama. Foci are also known to exist in India with high prevalence in Andhra Pradesh, Tamil Nadu and Jammu & Kashmir (incidence 4-16/100000). Incidence in Western Rajasthan, where sheep rearing and agriculture is main occupation amongst certain communities in rural area has not been studied in the past. Hydatid cyst disease is more common in population involved in agriculture since they keep cattle, sheep and dogs near their living places and housewives and school students are commonly affected, In India, surface contaminations of vegetables by contaminated water is probably a fertile source infection in the human. Affects both sex, being more common in females. Echinococcosis affects all age group. It may be localized in liver (75%), lungs 10-15% & other organ in the body such as spleen, brain, heart, & kidneys. The disease develops as slow growing mass in the effected tissue [2- 3] . Depending on the location of the cyst clinical symptoms varies. A clinical feature also depends on stage of the disease [4]. CT scan gives max. Information of the position & extent in abdomen cases [5-6-7].MRI is better than CT scan as it gives better visualization of liquid areas within tissue [8] .In cases not suitable for surgery PAIR become alternative option. However treatment depends up on stage of the disease. Drug therapy includes albandazole & /mabendazole [9] .In addition, there are recent studies on per cutaneous thermal ablation of germinal layer of cysts by mean of radiofrequency ablation device [10].Majority of the cases (49.9%) were between 41-60 years of age. Youngest patient was 9 years and the oldest was 78 years. Female were affected more often (63.3%) than male and male female ratio was 1: 1.7. Majority of cases were agriculture worker (40%), followed by house wives (33%), miscellaneous (16%) and students (10%). Recurrence disease present in 10%. Fever in 1 case (3.3%) and Jaundice 1 case (3.3%) were reported in past. Majority of cases (73%) were from rural area. Most of the patients (63.3%) kept pets and it included cattle and dogs (Fig. 1) .Majority of patients (86.6%) were vegetarians. Pain abdomen (76.6%) followed by lump abdomen (66.3%), nausea and vomiting (47.6%) and fever (23.3%) were most common presenting symptoms. Palpable lump in abdomen (70%) followed by tenderness (50%), were common signs on examination. Most common site of Lump was in right hypochondrium (56.6%) followed by right hypochondrium extending in to epigastrium (13.3%) and only epigastric lump (3.3%) (Table I).Leucocytosis,eosinophilia,elevated liver enzymes and bilirubin were common haematological abnormalities observed in this study. On ultrasonography cyst was present in right lobe of liver in 63.3% in left lobe in 13.3%.

13.3% patients had cyst at extra hepatic site (spleen ovary and pancreas). Cyst was solitary in 60% followed by multiple cyst in 33.3% and double cyst in 6.6% (Table II). 66.6% had cyst more than 10 cm, 13.3% had cyst <5 cm and 20% patients cyst was between 5 to 10 cm. Unilocular/simple cyst (70%) was more common as compared to multilocular cyst (30% (Table III). CECT scan was done in 6 (20%) and the information revealed was same as on ultrasonography. Excision of cysts (57%), marsupailization (32%) and pericystectomy (10.7%) were different surgical procedure performed for hepatic cysts. Other operative procedure like oopherectomy, cholecystectomy for associated cholethiasis, spleenectomy, cholecystectomy and CBD exploration for associated choledocholithiasis, and distal pancreaectomy were done either for extrahepatic cyst or for associated pathology. All patients underwent open surgical procedure. Hospital stay was 11-20 days in 30% cases, 21-30 days and > 30 days in 26.6% each, <7 days in 10% cases and 7-10 days in 6.6% cases. This study is comparable with other studies like Ahmet et al 1999 ,Metin et al 2002, Mustafa et al 2003, Silva et al 2004, Yagci et al 2005, Palanivelu et al 2006 and Michael et al 2006 [11-17.]

IV. Conclusion

Hydatid disease in not a very common ailment in western Rajasthan in spite of the fact that agriculture is common occupation with keeping cattle and dogs is very common. Persons between 41 to 60 years were affected more female and vegetarian were more commonly affected. Dull abdominal pain and Lump the abdomen were common presenting symptoms. Palpable mass in upper abdomen is common clinical finding. Leucocytosis, eosinophilia, deranged liver enzyme were common haematological abnormalities. Ultrasonography was diagnostic in almost all cases and CECT have limited indications. Pericystectomy, excision and marsupilization were commonly performed surgical procedures.

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