



## Hydatid Cyst Disease-A clinicopathologic study during 18 months period in JAH group of hospital ,Gwalior- case reports with Review of Literature

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### ABSTRACT

Abstract- Hydatid disease is a parasitic infection caused by larval stage of Tapeworm of genus Echinococcus granulosus and Echinococcus Multilocularis. It is endemic in many parts of world including central Asia and India.

Due to increased chances of travel, immigration, contact with pets and wildlife, it is commonly encountered zoonotic disease. Liver hydatidosis is one of the common causes of liver mass. Neurohydatidosis may lead to fatal complications if not intervened timely. It is important to make proper preoperative diagnosis based on imaging techniques and immunology, so that surgeon may take a particular precaution not to rupture the lesion as peritoneal spillage may lead to dissemination implantation. Aggressive surgical intervention concomitant with oral mebendazole or albendazole before and after the surgery is the preferred in the treatment of this disease.

**KEYWORDS :** Hydatidosis, Echinococcus granulosus, Neurohydatidosis, computed sonography.

### Introduction:

Hydatid cyst disease in humans is a zoonotic disease caused by larva of dog tapeworm, Echinococcus granulosus , or Echinococcus multilocularis

(1) Later is not common but more invasive by mimicking a malignancy. The infection is an important public health problem in livestock grazing regions of the world, particularly in central Europe, Africa, South America, New Zealand, Australia , Central Asia.

(2) It mainly involves liver, followed by lungs , Brain , spleen and soft tissue. (3) Intracranial hydatidosis accounts for 0.5%-3% of all cases of Hydatid cyst and contribute 1-2% of all intracranial space occupying lesions. (4) We have analyzed eleven cases of the hydatid cysts and discussed their mode of presentation, radiological features and outcome. The relevant literature is reviewed.

### Material & Methods:

This clinicopathologic study is carried out in histopathology section of Pathology Deptt, JA group of hospitals Gwalior. This is a retrospective study done during 18 months from Jan 2016 to August 2017. All the biopsy samples submitted for histopathology examination were considered. A total of 7210 samples were examined, out of these, 11 cases were reported as Hydatid cyst disease. Out of 11-6 (54.5%) were Liver Hydatid cyst, 3(27.2%) were Neurohydatidosis, 1(9%) spleen, and 1 (09%) soft tissue. All cases of Hepatic Hydatid cyst disease were suspected on USG and CT abdomen. All these clinically suspected cases were treated using Radical dissection, and soft tissue was submitted for histopathology in Pathology Deptt. Tissue was processed and stained with Hematoxyline and Eosin stain. On Microscopic Examination showed unilocular or multilocular cyst with an outer layer Ectocyst and a single layer Endocyst surrounded by acellular laminated pericyst. 5/11 cases showed scolices and proscolices. Rest showed necrotic tissue and some ghost cells.

### Review Literature:

Clinical details as available, supportive investigations, professional and socioeconomic status were taken into consideration. In our study, Liver Hydatid cyst disease was most common (6/11) as documented in previous studies. Almost all patients with liver cyst had a complaint of pain in Rt hypochondrium or epigastrium. 4/6 patients presented with hepatomegaly, 3/6 had fever, tenderness over Rt hypochondrium, 1/6 had fever with vomiting. Raised bilirubin was found in 2/6 with hepatomegaly, SGOT & SGPT were only mildly raised. Intrapulmonary complications were not found in any of the patients. Liver is the most common organ involved

(50–70%) followed by lungs (11–17%). followed by Primary splenic involvement (2.5–5.8%) Besides, soft tissues (2.4–5.3%), the heart (0.5–3%), the pericardium (5%), muscle, and subcutaneous tissues (0.5–4.7%) have also been reported to be involved (6) Brain Hydatid cyst disease contribute to (1-2%) of Intracranial Space Occupying Lesions. Hydatid cyst can remain asymptomatic for years long. Increase in size may lead to mass effect and complications. Diagnosis of cerebral Hydatid cyst disease is based mainly on neuroimaging and confirmed by histopathology. (8) Splenic Hydatid disease may remain asymptomatic for long. Patient complained of fullness of abdomen, mild pain in Left hypochondrium.

### Discussion:

Hepatic cyst always develop initially as a fluid filled cyst like structure, on further development daughter cysts develop. In some cases cysts become hypermature, due to starvation dies to become calcified, inert. (5) Depending on the host tissue resistance size of cyst may gradually increase from 1 to 10 cm. Uncomplicated Hydatid cyst of liver may remain asymptomatic for years or even decades depending on the size and site of developing cysts. In our study three out of eleven cases were diagnosed brain Hydatid cyst. Youngest patient was 6 yrs female another was adult female and one male. Adults complained of headache of 4-6 mth duration. CT Scan revealed parietal cystic lesion with mild mass effect. MRI with contrast showed an intraaxial cystic lesion with mass effect. Female child in our study, presented with headache, vomiting and seizures. Perilesional edema, haemorrhage or calcification was absent. These patients underwent total excision of the cyst with utmost care to avoid its rupture and spillage.

Hydatid disease is a rare disease that is endemic in many areas of world including Middle East and the Mediterranean countries. In India, the hydatid disease is more commonly seen in the Kurnool district of Andhra Pradesh, Madurai district of Tamil Nadu and in Punjab. (6) Various series of intracranial hydatidosis from India have reported its incidence as 0.2% of all intracranial space occupying lesions. (7) The Echinococcus granulosus alternates between carnivore and herbivore eg between dog and sheep, whereas man is an accidental intermediate host with ending point in parasitic life cycle. (8) The liberated ova burrows through intestinal mucosa and reach to liver or lung through portal circulation. Some ova can still pass through capillary filters and become lodged in any part of body through the bloodstream and reach brain, mediastinum, heart, bone or soft tissue.

**Conclusion:**

Hydatid disease is a rare zoonotic disease that can occur worldwide. Hepatic Hydatid disease needs to be differentiated from hepatic cyst, abscess, metastatic tumors. Neurohydatidosis is a rare entity that needs to be diagnosed and intervened at time so as to avoid fatal complications. It needs to be considered in differential diagnosis with intracranial cysts and other space occupying lesion. USG and CT scan are the preferred preoperative modalities for establishing the diagnosis.(9) Surgical management aims at complete drainage or resection of cyst with obliteration of cyst cavity avoiding the spillage .Preoperative and Postoperative treatment with Albendazole is the preferred drug, even for preventing recurrence.

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