

# Hydatid Cyst of the Liver: A Case Report

Dinesh Dutt Sharma<sup>1</sup>, Vimal Soni<sup>2</sup>, Prakhar Mathur<sup>3</sup>, Shamanth Hiremath<sup>4</sup>,  
Shaurya Sood<sup>5</sup>

<sup>1,2,3,4,5</sup>Department of General Surgery, Dr S.N. Medical College Jodhpur

**Corresponding Author:** Dinesh Dutt Sharma; Email Id: drdineshdutt@gmail.com, Address: 89, District shopping centre, 1<sup>st</sup> EXT. Kamla Nehru Nagar, Jodhpur

---

## ABSTRACT

The most common cause of hydatid disease in humans is infestation by the parasite *Echinococcus granulosus*. Although the liver is most involved organ, hydatosis can be found anywhere in human body. A 19 years old Adolescent male patient present with complaints of upper abdominal pain and nausea. Patient evaluated by ultrasound assessment of the whole of the abdomen and contrast enhanced CT Scan of abdomen. Abdominal sonography showed a multiloculated cystic lesion in the right and left lobe of liver with some punctuate calcifications at the peripheral wall and thickened septa. In CT scan a well defined cyst of size 8.9\*7.1 cm is noted in segment VII of right lobe of liver with peripheral calcification. Another cyst of size 4.8\*3.1 cm noted in segment II of liver on left side with internal membrane like structure. The patient was diagnosed as a case of hydatid cyst of liver and patient underwent open surgical removal of both cyst in liver. Histological study of the lesion showed a several thin walled cyst with many daughter cysts lying free in the cyst fluid.

**Key words:** Hydatid cyst, *Echinococcus*, liver

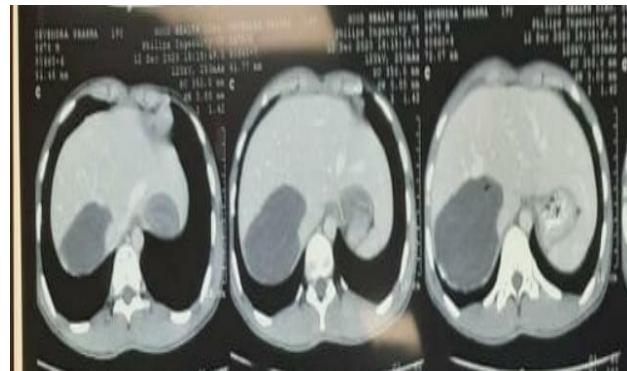
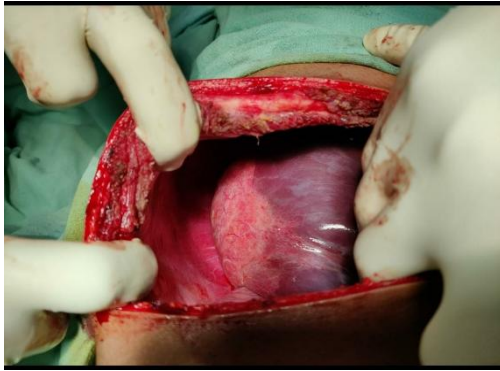
---

## INTRODUCTION

The most common cause of hydatid disease in humans is infestation by the parasite *Echinococcus granulosus*. This infection is an important public health problem in livestock grazing regions of the world. The most common cause of hydatid disease in humans is infestation by the parasite *Echinococcus granulosus*. It is more prevalent in sheep-and cattle-raising countries. In some areas of south America, Africa, And Asia, upto 10% of certain population affected. The infection is spread when food or water that contains eggs of parasites is ingested or by close contact with an infected animal. The disease often starts without symptoms and this may last for years. When the liver is affected, patient may experience abdominal pain, weight loss, jaundice<sup>1</sup>. Diagnosis is usually by ultrasound, CT scan or MRI may be used<sup>2</sup>. The imaging technique of choice for cystic echinococcosis is ultrasonography<sup>2</sup>. The most common form of treatment (standard) is open surgical removal of cyst combined with albendazole before and after surgery. For inoperable cases chemotherapy (Albendazole) and/or PAIR (puncture-aspiration-injection-reaspiration) become alternative options of treatment<sup>3</sup>.

## CASE SUMMARY

A 19 years old Adolescent male patient present with complaints of upper abdominal pain, Discomfort and nausea since 15 days in surgical OPD of mahatma ghandhi hospital, jodhpur. On examination there is only mild tenderness in right hypochondrium is present. Patient is further evaluated. On USG a multiloculated cystic lesion in the right and left lobe of liver with some punctuate calcifications at the peripheral wall and thickened septa, further contrast enhanced CT scan is done which shows a well defined cyst of size 8.9\*7.1 cm is noted in segment VII of right lobe of liver with peripheral calcification with floating membrane within cyst. Another cyst of size 4.8\*3.1 cm noted in segment II of liver on left side with internal membrane like structure, which are in favour of hydatid cyst disease of liver. Preoperative Albendazole 400mg twice a day, patient underwent open surgical removal of both cyst. And postoperative albendazole is given for days. Patient's postop period is uneventful. Histopathology report suggest a several thin walled cyst with many daughter cysts lying free in the cyst fluid. Patient discharge in clinically satisfactory condition.



## DISCUSSION

Hydatid cyst is a zoonotic disease that occurs throughout the world particularly in those areas where people are involved in cattle rearing profession<sup>7</sup>. In human this cyst is caused by the larva of a tapeworm *Echinococcus granulosus*<sup>8</sup>. *Echinococcus granulosus* is a tapeworm, 3 to 6 mm in length, which lives in the intestine of the definitive host, usually the dog. Its eggs are excreted in the dog's feces and swallowed by the intermediate hosts-sheep, cattle, goats, or humans. A hydatid cyst is typically acquired in childhood and it may, after growing for some years, cause pressure symptoms. These vary, depending on the organ or tissue involved. In nearly 75% of patients with hydatid disease the right lobe of the liver is invaded and contains a single cyst. In others a cyst may be found in lung, bone, brain or elsewhere<sup>6</sup>. The diagnosis depends on the clinical, radiological and ultrasound findings. Sometimes Hydatid cyst may be remained asymptomatic for years long. In the liver, the right lobe is more frequently involved<sup>4,5</sup>. Its presence may become evident when the hepatomegaly is found or a cystic lesion is noted when the liver is imaged for other reasons.

It may be painful or lead to complications such as rupture into biliary tract or peritoneal cavity which may cause cholangitis or anaphylactic shock<sup>9</sup>. Hydatid cyst can be solitary or multiple in nature. Imaging findings depends upon the stage of cyst growth. Laboratory screening examination in most cases showed normal results. Calcification in cyst is usually curvilinear or ring like and involves the pericyst. The presence of multiple echogenic foci that fall into the dependent portion of the cyst during posture change of the patient is a characteristic ultrasound finding such as snowstorm sign. On CT scan and MRI the septa and cyst wall frequently enhance after injection of contrast material frequently. The differential diagnosis can be made when there is history of living in endemic regions along with these imaging findings. The patient with hydatid cyst frequently present a therapeutic challenges. Medical treatment of hydatid cyst with drugs like mebendazole/ albendazole has been reported but medical therapy alone has controversial results<sup>10</sup>. It has been used in the prevention of post-operative local recurrence and sterilization before surgery<sup>11</sup>. Surgery is considered as best possible treatment having potential to remove the cyst and complete cure<sup>12</sup>. The main principle of surgical treatment is to eradicate the parasite, prevent intra-operative spillage of contents and obliterate the residual cavity. Recurrence of hydatid cyst may occur either from spillage of hydatid fluid during the surgical procedure or from any re-infestation of the patient<sup>13</sup>.

## CONCLUSION

Personal hygiene, satisfactory disposal of carcasses, meat inspection and deworming of dogs can greatly reduce the prevalence of hydatid diseases. Ultrasound has excellent role in detecting hepatic pathology as it is non-invasive, cheap, easily available. Aggressive surgical intervention concomitant with oral albendazole, before and after surgery for uncomplicated hydatid liver cysts, is still preferred in treatment of this disease.

## REFERENCES

- [1]. "Echinococcosis Fact sheet N°377". World Health Organization. March 2014. Archived from the original on 21 February 2014. Retrieved 19 March 2014.
- [2]. Brunetti E, Kern P, Vuitton DA (April 2010). "Expert consensus for the diagnosis and treatment of cystic and alveolar echinococcosis in humans". *Acta Trop.* **114** (1): 1–16. doi:10.1016/j.actatropica.2009.11.001. PMID 19931502.
- [3]. Eckert J, Deplazes P (January 2004). "Biological, epidemiological, and clinical aspects of echinococcosis, a zoonosis of increasing concern". *Clin. Microbiol. Rev.* **17** (1): 107–35. doi:10.1128/cmr.17.1.107-135.2004. PMC 321468. PMID 14726458.
- [4]. Rumack et al. eds. Diagnostic Ultrasound, Vol-1, p.92-4.
- [5]. Gharbi HA, et al. Ultrasound examination of the hydatid liver. *Radiology*, 1981;139:459:463.
- [6]. Christopher R.W. Edwards et al. Davidson's principles & practices of medicine. p.170-1.

- [7]. Agaoglu N, Turkyilmaz S, Arslan MK. Surgical treatment of hydatid cysts of the liver. Br J Surg 2003; 90:1536-1541
- [8]. Kumar MJ, Toe K, Banerjee RD. Hydatid cyst of liver. Postgrad Med J 2003; 79: 113-114
- [9]. Lygidakis NJ. Diagnosis and treatment of intrabiliary rupture of hydatid cyst of the liver. Arch Surg 1983; 118: 1186- 1189
- [10]. Todorov T, Vutova K, Mechkov G, Petkov D, Nedelkov G, Tonchev Z. Evaluation of response to chemotherapy of human cystic echinococcus. Br J Radiol. 1990; 63: 523-531
- [11]. Topcu S, Kurul IC, Tastepe I, Bozkurt D, Gulhan E, Cetin G. Surgical treatment of pulmonary hydatid cysts in children. J Thorac Cardiovasc Surg. 2000; 120: 1097-1101
- [12]. WHO Guidelines for treatment of cystic and alveolar echinococcosis in humans. Bull World Health Organ. 1996; 74: 231-242
- [13]. Ustunsoz B, Akhan O, Kamilogu MA, Somunca I, Ugurel MS, Cetiner S. Percutaneous treatment of hydatid cysts of the liver: long-term results. AJR Am J Roentgenol 1999; 172: 91-96