

## Hydatid Cyst Presenting With Inferior Vena Cava Obstruction

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### **ABSTRACT**

Hydatid cyst disease is caused by echinococcus species in humans. Humans are accidental hosts. Here, we present a case report of male with disseminated hydatid cyst disease secondary to spillage of peritoneum with cysts during the previous surgery. He presented with features of inferior vena cava obstruction. We report this case as inferior vena cava (IVC) obstruction is a rare presentation of this common disease of Himalayan area like ours where animals stay at close proximity to humans.

**Key words:** hydatid cyst, echinococcus, inferior vena cava

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**Case report is Original:** YES

**Whether case report publishes any where?** NO

### **INTRODUCTION**

Hydatid disease is globally distributed and found in every continent except Antarctica. More than 1 million people are affected worldwide and rural population is at most risk of acquiring infection. It is often expensive and complicated to treat. The highest prevalence in India has been reported from Andhra Pradesh, Saurashtra, and Tamil Nadu. Asymptomatic incubation phase can last for years till cysts grow to an extent that triggers compression symptoms. Hydatid cysts have been reported from every part of the human body like liver, lungs, peritoneum, bones, ovaries, breast and brain. However only few case reports of IVC obstruction are available worldwide.

### **CASE REPORT**

A-40-Year-old male with a history of surgery for hepatic hydatid cyst 10-years back referred from remote Himalaya's primary health centre with jaundice and dilated veins on abdomen for 1-month duration. He had no other symptoms. Examinations showed dilated tortuous veins on the abdomen with flow down to upward (Figure –A). Breath sounds were absent on the right infra axillary and infra-scapular area of chest. Liver was palpable 8 centimeters below the right costal margin and a non-tender lump was palpable in the right iliac fossa measuring 10x8 centimeters. Except for raised bilirubin (total 19 mg/dl and conjugated bilirubin 11 mg/dl), results of liver functions, renal functions and complete hemogram were normal. X-ray chest showed homogenous opacity in middle and lower zone of right lung.

Computed tomography showed multiple cysts in the lower lobe of right lung, in the liver and in the peritoneal cavity of abdomen and pelvis (Figure-B) with daughter cysts within large cyst -pathognomonic for hydatid cyst. Venous Doppler showed marked compression of inferior vena cava. The enzyme linked immunosorbant assay (ELISA) was positive for echinococcus. Surgical resection was not possible because of multifocal dissemination of the disease and was treated with albendazole (15mg/Kg/ day). Follow-up at three month showed mild improvement in symptoms. Spillage of protoscolices during previous surgery probably explains the multifocal dissemination of hydatid disease in our patient.

**FIG- A: Tortuous dilated veins on the abdomen**



**FIG- B: Multiple hydatid cysts in the abdomen and pelvis with daughter cysts.**



## DISCUSSION

Hydatid cyst disease is an infection caused in humans by the larval stage of the Echinococcus granulosus complex, E. multilocularis, or E.vogeli.<sup>1</sup> After humans ingest the eggs by handling a dog or drinking contaminated water, embryos are liberated from the eggs in the small intestine and enter the portal circulation to various organs. Liver followed by the lung are the two most common sites involved in 55-70% and 18-35% respectively and the two sites are involved simultaneously in about 5-13% of cases.<sup>2</sup> The resultant cysts grow very slowly and generally remain asymptomatic until cysts are large enough to cause compressive symptoms. Multifocal dissemination of protoscolices during previous surgery for liver hydatidosis probably explains the widespread location of multiple hydatid cysts in our patient and were asymptomatic for years before cysts were large enough to cause inferior vena cava compression (dilated tortuous veins) and biliary and bile duct compression (obstructive

jaundice). Demonstration of daughter cysts within the large cyst on computed tomography (CT) scan is the most pathognomonic finding in detecting echinococcal cyst as demonstration of protoscolices or hooklets in the aspirated fluids; a specific diagnosis of *E. granulosus* usually not recommended because of fear of either dissemination of infection or anaphylactic reaction. Surgical resection is the treatment choice for the localized disease, while the therapy for disseminated hydatidosis remains medical.<sup>3</sup>

### **CONCLUSION**

IVC obstruction is uncommon manifestation of hydatid cyst disease. Treatment depends on site of obstruction and number of cysts. Prevention programmes involve deworming of dogs, improved food inspection and slaughterhouse hygiene, and public education campaigns

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