Hydatid disease caused by infection with *Echinococcus granulosus* tapeworm is endemic in the Mediterranean basin, Central Asia, Africa and South America. However, as a result of increased migration and immigration, hydatidosis is becoming a worldwide health problem. Due to the lack of well-documented data, the global and Indian picture of the current situation is incomplete. In some European countries or regions, the annual incidence of hospital cases of human cystic echinococcosis vary between < 1 and > 8 per 100,000 population.\(^1\) High incidence rates or prevalence have also been recorded from countries in South America (9.2/100,000 population in Uruguay in 1995)\(^1\). In India, hydatid cyst disease is common in most of the states, of which Andhra Pradesh and Tamil Nadu predominate.

In general, hepatic hydatid cysts are single (80%), uncomplicated, and located in the right lobe of the liver (80%). Asymptomatic cysts may persist for years without producing any symptoms.

Here we report a case of asymptomatic hydatid cyst of the liver causing inferior vena caval obstruction.

**Case Report**

A 50 yr old male, agriculturist by occupation and a known case of systemic hypertension with chronic kidney disease was admitted in Thanjavur Medical College Hospital with complaints of decreased urine output and bilateral pedal oedema of one week duration. Patient had positive history of nausea and vomiting and generalised itching. He had negative history of fever, easy fatigability, abdominal fullness, difficulty in breathing. He was admitted in Thanjavur Medical College Hospital with complaints of decreased urine output and bilateral pedal edema of one week duration. Patient had positive history of nausea and vomiting and generalised itching. He had negative history of fever, easy fatigability, abdominal fullness, difficulty in breathing. He was on regular treatment for systemic hypertension.

On examination, his vitals were stable. He had bilateral pitting pedal oedema. Inspection of Abdomen revealed dilated and tortuous veins over the anterior abdominal wall and the flanks (Figure 1). Direction of flow of blood was from below upwards. There were no dilated veins over the back or over the chest wall. There was no abdominal distension, organomegaly or evidence of free fluid. Other system examinations were normal. A clinical diagnosis of systemic hypertension with chronic kidney disease and Inferior vena cava (IVC) obstruction were made. The cause for vena caval obstruction was sought.

Following investigations were done: CBC- Hb 9.4 g%, TC 5000 cells/cumm, DC P 59, L 38, E 3, RBC 3.6 million, platelets 2 lakhs, PCV 30%, ESR at 1 hr- 24 mm. Urine albumin was 1+ with 2-5 pus cells. Random blood sugar: 136 mgs/dl, blood urea 122 mgs/dl, serum creatinine 6.7 mg/dl, 24 hrs urine protein was 3.9 gms. SGOT 28 U/L, SGPT 31 U/L, Total Bilirubin 1 gm/dl, alkaline phosphatase 70 U/L, serum protein 6.1 gm/dl. ECG showed Left ventricular hypertrophy. Chest X-ray showed elevated right dome of diaphragm.

Ultrasound abdomen was done which revealed a 9.3 × 7.3 cms cystic lesion in the right lobe of liver extending to the left lobe; bilateral contracted kidney with increased echogenicity. Radiologist reported the findings as bilateral type II renal parenchymal disease with hydatid disease of liver. CT abdomen reported a 10 × 7 cms partially calcified hydatid cyst with multiple daughter cysts in right lobe of liver near the hilum compressing IVC and causing IVC obstruction (Figure 2). Doppler study of portal vein showed normal phasic flow and no evidence of thrombus in portal vein or Inferior vena cava. Upper GI scopy was normal. Cavography could not be done in view of elevated renal parameters. Hydatid cysts were not found in other organs.

On enquiring the patient retrospectively, he gave history of close contact with his pet dog.

He was treated with anti-hypertensive, diuretics and with anti-helminthics. Nephrologist opinion was obtained for chronic kidney disease. Surgical gastroenterologist opinion was obtained for hydatid cyst with vena caval obstruction. Surgical removal of the cyst was suggested after stabilisation of the renal parameters.

**Discussion**

Cystic echinococcosis is a zoonoses of increasing importance because of the medical and economic burden posed by the disease. The initial phase of the primary infection is always asymptomatic. Small, well encapsulated, nonprogressive or calcified cysts typically do not induce major pathology, and patients may remain asymptomatic for years or permanently. The induction of morbidity depends on the number, size, and developmental status of the cyst(s) (active or inactive), the involved organ, the localisation of the cyst(s) within the organ, the pressure of cysts on surrounding tissues and structures, and the defence mechanisms of the infected individual.

Clinical signs may occur after a highly variable incubation...
period. Frider et al. observed that 21 (75%) of 28 carriers of liver cysts in Argentina remained asymptomatic during follow-up periods of 10 to 12 years after the initial diagnosis, while 7 (25%) developed symptoms related to their liver infection. Results of this study revealed that most asymptomatic liver hydatid cases (75%) remain symptom-free for more than 10 years, regardless of cyst size or type.

Hepatic cysts can cause pain in the upper abdominal region, hepatomegaly, cholestasis, biliary cirrhosis, portal hypertension, ascites, and a variety of other manifestations. Secondary complications may occur as a result of infection of the cyst or leakage of the cyst.

Only a few case reports of hepatic hydatidosis with IVC obstruction are available worldwide.

A case of large hydatid cyst causing IVC obstruction in a 48 year old lady has been reported in Manipal, Karnataka. Case of portal hypertension secondary to obstruction of inferior vena cava and hepatic outflow tract was reported in Istanbul, Turkey. A rare case of a hydatid cyst in the IVC and right atrium with venous flow obstruction and pulmonary dissemination has also been reported in Spain. A large hepatic hydatid cyst causing extra-thoracic compression of the heart with right ventricular outflow obstruction, right lung atelectasis and multiple IVC thrombi was reported in Pondicherry where patient underwent emergency laparotomy and decompression.

Ultrasound is the most helpful diagnostic procedure, with a specificity of 90% especially in subacute and chronic cases. It frequently demonstrates caval obstruction, thrombosis, dilated hepatic veins and intrahepatic collaterals. CT gives information similar to ultrasound but more specific details about localisation, depth in liver and volume of cyst. Diagnosis is confirmed by cavography, which shows a marked narrowing of the hepatic portion of the vena cava. In subacute and chronic cases cavography also demonstrates collateral veins, such as the ascending lumbar, hemiazygos and azygos veins that drain into the superior vena cava.

Here we report a case of a large hepatic hydatid cyst causing IVC compression and obstruction, which was found incidentally during examination of a 50 yr old agriculturist admitted for renal disease. We report this case due to the rarity of its presentation and as the 3rd such case report published in India.

References