

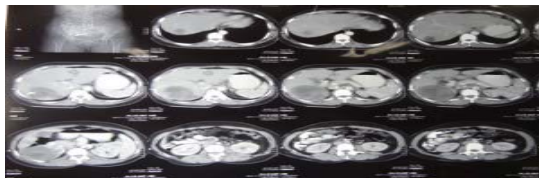


A CASE OF SYNCHRONOUS HYDATID CYSTS - LIVER AND KIDNEY PADAM KUMAR B

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Abstract : Hydatid cyst of liver and kidney co-exist very rarely. We present a case of synchronous hydatid cyst in the kidney and liver which was symptomatic. The patient underwent partial nephrectomy and pericystectomy of liver hydatid cyst. She had a good outcome postoperatively. Thus Echinococcus granulosis can affect any organ in the body and a high suspicion of this disease is justified in a cystic neoplasm of any organ, especially in endemic regions.

Keyword : Hydatid cyst , liver and kidney, partial nephrectomy, pericystectomy



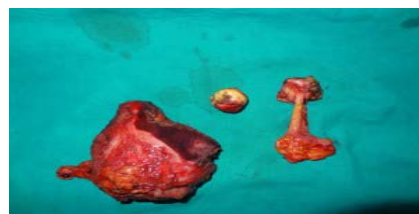
CECT ABDOMEN - HYDATID CYST LIVER AND KIDNEY



HYDATID CYST IN RIGHT KIDNEY



PERICYTECTOMY OF LIVER HYDATID CYST



RESECTED RIGHT PARTIAL NEPHRECTOMY AND PERICYTECTOMY OF LIVER HYDATID CYST



DAUGHTER HYDATID CYST IN CUT PARTIAL NEPHRECTOMY SPECIMEN



LINE OF DEMARCATION FOR PARTIAL NEPHRECTOMY



COMPLETION OF RIGHT PARTIAL NEPHRECTOMY A CASE OF SYNCHRONOUS HYDATID CYSTS - LIVER AND KIDNEY

A 48 year old female presented with complaints of abdominal pain for 3 months which was Intermittent, mainly in right flank & lower abdomen with no specific aggravating or relieving factors. She also had H/o Vomiting containing food particles, non bilious and H/o loss of appetite. No H/o Loss of weight, No H/o abdominal distension, No H/o bowel disturbances, No H/o difficulty in micturition or painful micturition. She had no known co morbid illness. H/o Peurperal sterilisation done 23 years back. No other history of surgeries or prolonged medications. Taking mixed diet. Attained menopause 3 years back. She has two male children 23 & 25 yrs old . On Examination she was conscious ,oriented, moderately built and nourished, not pale, not icteric, no generalised lymphadenopathy. Pulse 80/min, BP-110/70 mmHg. Cvs/Rs—clinically normal. Abdomen was flabby, all quadrants move equally with respiration, umbicus in midline, no dilated veins. PS scar present, no visible mass or peristalsis. On palpation it was soft, no tenderness, no mass palpable , no organomegaly , no nodes palpable with no e/o free fluid. Bowel sounds normal. PR – Tone Normal, Fecal Staining present. Basic blood investigations including complete hemogram, renal and liver function tests were consistently within normal limits. Chest Xray & Abdomen Xray (erect) – Normal Study. ECG - normal. VDRL / VCTC / HbsAg/ Anti HCV – Negative. Thyroid function test normal. USG Abdomen showed Small hydatid cyst – Right lobe of liver and a mass – upper pole of Right Kidney. Then we did Contrast enhanced CT Abdomen which showed well defined hypoechoic cystic lesion with multiple loculations, septations and specks of calcifications in the upper pole of Right kidney and similar looking lesions in segment VI and also in Left lobe of liver - suggestive of Hydatid cyst of kidney with similar lesions in liver . IV Urography showed – Distorted calyces in the upper pole of right kidney. Latex Agglutination Test -- Negative We came to a diagnosis of Hydatid cyst of kidney and liver planned for laparotomy and proceed. Intra Op Findings : Large cystic lesion arising from the upper pole of right kidney -- 9*7*3 cm and two other cysts in segments 6 & 3 of liver 2*2 cm. The patient underwent right partial nephrectomy with cystopericystectomy of hydatid cyst liver. Post op period was uneventful. Histopathological report of the specimen showed kidney interstitium infiltrated with chronic inflammatory cells. Cyst shows cyst wall lined with fibro cartilaginous tissue lined by ribbon like internal laminated membrane – F/s/o Hydatid cyst.

DISCUSSION:

Hydatid disease is a zoonosis caused by cestodes most commonly by *Echinococcus granulosus* and less commonly by *E. multilocularis* & *E. vogeli* .It is more common in sheep raising countries like Australia, New Zealand, Tasmania, Turkey and Greece. In India it is more common in Andhra Pradesh & Tamilnadu. Disease of younger adults with an average age at diagnosis of 30-40 years without any sex predilection. It is asymptomatic in 75% cases. Organs affected are - Liver : 52-77%, Lung : 8.5 - 44%, Abdominal cavity: 8%, Kidney: 1 %, CNS: 0.2 -2.4%, Bone: 1 -2.5%. Life cycle consists of 2 hosts - Definitive host - dog , Intermediate host - human. It has 3 developmental stages the adult tapeworm in the definitive host, eggs in the environment, and the metacestode in the intermediate host. Hydatid cyst- typically unilocular, size increases by 1-1.5 mm diameter per month. ENDOCYST- germinal membrane produces clear hydatid fluid, ectocyst, brood capsules, scoleces & daughter

cysts. ECTOCYST- outer chitinous membrane without nuclei . PERICYST- avascular, formed in 5 months due to host tissue response. Cyst fluid contains infective protoscolices. Larvae hatch, penetrate venules in the wall of the duodenum, and are carried by the bloodstream to the liver. Those larvae that escape the liver are next filtered by the lungs. Approximately 3% of the organisms that escape entrapment in the liver and lungs may then enter the systemic circulation and infect other organs. Renal involvement is uncommon and seen in only less than 2% of cases. Synchronous hydatid lesions are usually reported in liver and lung but rare in liver and kidney as in our case. Symptoms & signs depends on the organ involved usually right upper quadrant abdomen pain, vomiting, nonspecific fatigue & Weight loss. Cystic rupture into the collecting system, causing hydatiduria is pathognomonic, though seen in only 10-20% of renal hydatidosis and is usually microscopic. The blood investigation shows Eosinophilia otherwise normal. Casoni's test has sensitivity of 60-80% - positive test may persist for several years after excision of cyst. Other immunological tests done are Complement fixation test , ELISA and Indirect haemagglutination test. Ultrasound abdomen shows Well-defined, circumscribed, cystic lesions with a clear membrane, daughter cysts (rosettes), detachment of membrane (double contour) . Useful for staging , intervention and follow-up. CT scan has an accuracy of 98% and the sensitivity to demonstrate the daughter cysts. It is the best test for the differentiation of hydatid from amebic and pyogenic cysts in the liver. A hydatid cyst typically demonstrates a high-attenuation wall at unenhanced CT even without calcification. The treatment of hydatid cysts is principally surgical. However, pre- and post-operative 1- month courses of Albendazole and / or 2 weeks of Praziquantel should be considered in order to sterilize the cyst, decrease the chance of anaphylaxis, decrease the tension in the cyst wall (thus reducing the risk of spillage during surgery) and to reduce the recurrence rate post-operatively. Intraoperatively, the use of hypertonic saline or 0.5% silver nitrate solutions before opening the cavities tends to kill the daughter cysts and therefore prevent further spread or anaphylactic reaction. Chemotherapy, as an adjuvant therapy, with or without puncture aspiration-injection-re-aspiration (PAIR) is suitable for inoperable hydatid disease. Many centres have started performing laparoscopic resection whenever possible.

CONCLUSION:

We conclude that *Echinococcus granulosus* can affect any organ in the body and a high suspicion of this disease is justified in a cystic neoplasm of any organ, especially in endemic regions. Moreover, medical treatment should precede and follow the surgical intervention and organ preserving surgery should be the goal.

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