

ISOLATED GIANT RENAL HYDATID CYST; A RARE CLINICAL PRESENTATION

General Surgery

Dr. Debapratim De	Junior Resident, Department Of General Surgery, Bankura Sammilani Medical College And Hospital
Dr. Arnab Mandal	Associate Professor, Department Of General Surgery, Bankura Sammilani Medical College And Hospital
Dr. Sagar Mridha	Junior Resident, Department Of General Surgery, Bankura Sammilani Medical College And Hospital
Dr. Sombuddha Dey	Junior Resident, Department Of General Surgery, Bankura Sammilani Medical College And Hospital
Prof. (Dr) Subhabrata Das	Professor, Department Of General Surgery, Bankura Sammilani Medical College And Hospital

ABSTRACT

Hydatid cyst or cystic Echinococcosis is a parasitic infestation caused by the larval stage of the Echinococcus tape worm. It causes cysts to form in various organs, most commonly the liver. A 26-year-old female patient, presented with an, abdominal lump, gradually enlarging over 6 months. Clinical examination revealed an intra-abdominal mass occupying the right upper quadrant, moving with respiration. Imaging findings were of a single, uni-locular cyst, in close proximity to the liver and right kidney, likely to be a hydatid cyst of the liver. On surgery, surprisingly, the cyst was found to be arising from upper pole of right kidney without any other organ involvement, and containing clear fluid and hydatid sand; histopathology confirmed hydatid cyst.

KEYWORDS

Hydatid cyst, Isolated Hydatid cyst, Renal Hydatid cyst, Uncommon location of Hydatid cyst

INTRODUCTION

Echinococcal infection, a zoonosis, is caused most commonly by Echinococcus Granulosus [1]. It is a common cause of hepatic cysts worldwide, particularly in the Middle East, Australia, North America, India and parts of South America [2]. Hydatid cysts are slow growing space occupying lesions that can be seen in virtually every organ of body [3]. Hydatid cysts are commonly found in liver and lungs and can be occasionally treated by medical therapy (Albendazole & Mebendazole). Isolated Hydatid cyst of the kidney is extremely rare and there are no data available on medical treatments of renal hydatid cyst. Surgical treatments include injection of scolicalid agents, marsupialization, per cutaneous drainage, simple cystectomy and total nephrectomy. It is generally agreed that excision of the cyst with conservation of the renal parenchyma is the most appropriate treatment.

Case Report

Our patient, a 26-year-old married woman, presented with a large abdominal lump which has been gradually increasing in size over the preceding 6 months. She also complained of having occasional Right upper quadrant pain and Right flank pain with intermittent low-grade fever. On examination, the lump was intra-abdominal, firm in consistency, lateral and medial margins were smooth and well defined but upper and lower margins could not be traced clearly. It moved significantly, up and down, with respiration.

USG whole abdomen showed 13 x 11 cm well defined cystic SOL in relation to liver and right kidney, likely hydatid cyst of liver.

CECT whole abdomen and MRI, both reported hydatid cyst of liver; MRI had been done for additional information regarding spatial relationship of the lesion to adjacent structures, in view of the large size.

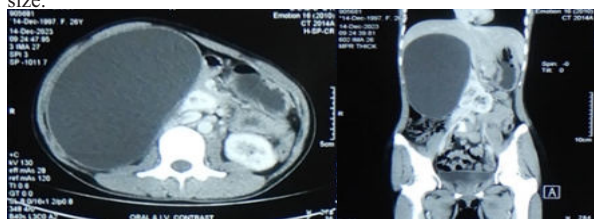
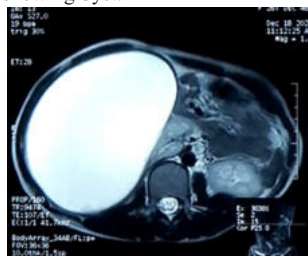


Fig 1. CECT showing Cyst (Axial).

Fig 2. CECT showing cyst (longitudinal)

Fig 3. MRI showing Cyst.



Echinococcal IgG (ELISA) was done but was found to be non-reactive (4.73 U/ml). Chest X ray showed no abnormalities.

On surgical exploration the cyst was found to be arising from the upper pole of right kidney, and lying close to the liver without involving it. On opening the cyst, clear fluid was drained and a small amount of hydatid sand and a few small daughter cysts were found at the bottom. The cyst wall was carefully separated from the Renal cortex. Biopsy report confirmed it to be hydatid cyst of kidney. The patient was discharged with Albendazole therapy, and currently, is doing well.



Fig 4a. Cyst arising from Kidney -1

Fig 4b. Cyst arising from Kidney -2



Fig 5. Cyst Excised

DISCUSSION

Humans become infected by accidental ingestion of eggs of the Tapeworm *Echinococcus granulosus*, either by ingesting contaminated food, or through contact with dogs. After ingestion of the eggs, the capsule of the eggs opens in the small intestine. The larvae penetrate the jejunum, and through veins and lymphatics, settle in various organs to develop into hydatid cysts [1]. Cyst of liver and lungs constitute 90% of the cases and only 10% occur in the rest of the organs in the body [4]. Other sites are the brain, bones, kidney, pancreas, etc. However, isolated hydatid cyst of the kidney, as in our case, is extremely rare [5]. The cyst is usually single and lies in the cortex of the kidney. Symptoms may vary according to the size and extent of the cyst. These cysts may reach an enormous size before causing symptoms, which matches our experience [6]. Patients may be asymptomatic if the cyst is closed and not communicating with the collecting system. Symptomatic patients most commonly present with flank pain, hematuria and hypertension. A palpable mass is the only clinical sign [7,8]. The various modalities of treatment of renal hydatid cyst include medical treatment, percutaneous intervention, open surgery and minimally invasive surgery. Mebendazole and Albendazole have been the recommended drugs, but these have limited efficacy and serious side effects, so is limited. [9,10]. Surgery is the treatment of choice for renal hydatid cysts, as we did in our case. Superficial renal hydatid cysts that do not have any renal parenchymal involvement can be treated by cystectomy or peri cystectomy. However in cases in which the cyst extends deep into the renal parenchyma, partial nephrectomy may be required, preserving as much of parenchyma as possible [11]. These nephron sparing surgeries are possible in 75% of the cases; total nephrectomy should be reserved only for cases in which entire kidney is occupied by cyst.[12] Fortunately, we were able to excise the lesion, in our case, without any significant loss of renal parenchyma.

CONCLUSION

Hydatid disease is a parasitic infestation by Echinococci, involving the liver and lungs only, in 90% cases. This is a case of Isolated giant Hydatid cyst of right kidney without other organ involvement, which is extremely rare. Surgical excision of cyst with preservation of renal parenchyma was carried out, with a favourable outcome.

REFERENCES

1. Kiresi DA, Karabacakoglu A, Odev K, Karakose S. Uncommon locations of hydatid cysts. *Acta Radiol.* 2003;44:622-636
2. Reddy CR, Narasiah IL, Parvathi G, Rao MS. Epidemiology of Hydatid diseases in Kurnool. *Indian J Med Res.* 1968;56:1205-1220
3. Von Lichtenberg F, Lehman JS. Parasitic diseases of the genitourinary system. In: Harrison JH, Gittes RF, Perlmutter AD, Stamey TA, Walsh PC, eds. *Campbell Urology*. 4th ed Vol 1 Philadelphia, PA: Saunders; 1978:631-633
4. Pedrosa I, Saiz A, Arrazola L, Ferreiros J, Pedrosa CS. Hydatid disease: radiologic and pathologic features and complications. *Radiographics.* 2000;20:795-817
5. Afsar H, Yagci F, Aybasi N, Meto S. Hydatid disease of the kidney. *Br J Urol.* 1994;73:17-22
6. Poullos C. Echinococcal disease of urinary tract: review of management of 7 cases. *J Urol.* 1991;145:924-927
7. Halim A, Vaezzadeh K. Hydatid disease of genitourinary tract. *Br J Urol.* 1980;52:75-78
8. Baxter-Smith DC, Smith SET, Hughes MA. Renal hydatid disease: an unusual aetiology. *Br J Urol.* 1987;60:179
9. Todorov T, Vutuvu K, Mechkov G, et al. Evaluation of response to chemotherapy of human cystic echinococcosis. *Br J Radiol.*
10. Akhan O, Ozmen MN, Dincer A, Sayek I, Gocmen A. Liver hydatid disease: long term results of percutaneous treatment. *Radiology.* 1996;198:259-264
11. Tryfonas GJ, Avtzoglou PP, Chaidos C, Zioutis J, Gavopoulos S, Limas C. Renal hydatid disease: diagnosis and treatment. *J Pediatr Surg.* 1993;28:228-231
12. Zmerli S, Ayed M, Horchani A, Chami I, El Ouakdi M, Ben Slama MR. Hydatid cyst of the kidney: diagnosis and treatment. *World J Surg.* 2001;25:68-74