

LAPAROSCOPIC MANAGEMENT OF ISOLATED RENAL HYDATID CYST A RARE CASE

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Abstract

Hydatid disease is a cyclozoonotic parasitic infestation caused by the cestode Echinococcus granulosus. Isolated renal involvement is extremely rare. A 58-year-old female, housewife presented with vague abdominal pain. Ultrasonography of the abdomen revealed complex cyst arising from the right kidney. Computerized tomography scan of the abdomen revealed large complex cyst arising from right kidney. Laparoscopic transperitoneal cystectomy was performed. Isolated right renal hydatid cyst was removed in toto. Microscopic examination confirmed the diagnosis of hydatid cyst. Transperitoneal laparoscopic approach gives a better working space which helped us to remain outside Gerota's fascia and prevent subsequent cyst rupture.

Key Words: Hydatid cyst, laparoscopy, cystectomy.

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Introduction

Echinococcosis or hydatid disease is a cyclozoonotic parasitic infestation caused by the cestode Echinococcus granulosus. Human infestation is caused by larval form, and not the adult form, which is found in the small intestine of dog and other canine animals. Kidney involvement in echionococcosis is extremely rare, it is the third commonest organ involved after the liver and the lungs, constituting only 2-3% of all cases, even in areas where hydatid disease is endemic[1]. Isolated renal involvement is even rarer. We present a case of a 58-year-old female, with isolated renal echinococcosis, a very rare presentation, and its management by laparoscopic transperitoneal cystectomy.

Case Report

Mrs Parul Begum, aged 58yrs from Chouddogram, Comilla got admitted in CMH Dhaka on 19 May 2018 with the complaints of pain in the right loin for the last

1yr which was intermittent dull aching in nature. No history of fever, dysuria, cough, wt loss. She is non diabetic, normotensive, having no co-morbidity. She is average built with BMI 24. Clinical examination revealed, the right kidney is grossly enlarged and palpable. All the hematological and biochemical parameters are within normal limit. USG of whole abdomen revealed a large complex cyst with few septations (10.3x7.4) arising from upper pole of the right kidney displacing the lower pole medially. Contrast CT scan of KUB showed a large complex cystic mass (11.2x8 cm) with septations and thin rim of calcification arising from upper pole. Echinococcus antibody was negative. She underwent laparoscopic transperitoneal cystectomy followed by, injection of sclerosing agent done under GA on 30 May 2018.

Multiple daughter (hydatid) cyst was extracted from the cavity and the cavity was irrigated with 10% povidone Iodine and omentoplasty done. The cyst wall sent for histopathological examination and daughter cyst for microscopic examination. The patient recovered well and discharged on 02 Jun 2018 with albendazole. The histopathology revealed upper pole of kidney parenchyma being replaced by a unilocular cyst, measuring (11.2x8 cm) in diameter and filled with daughter cyst. The outer wall was calcified.

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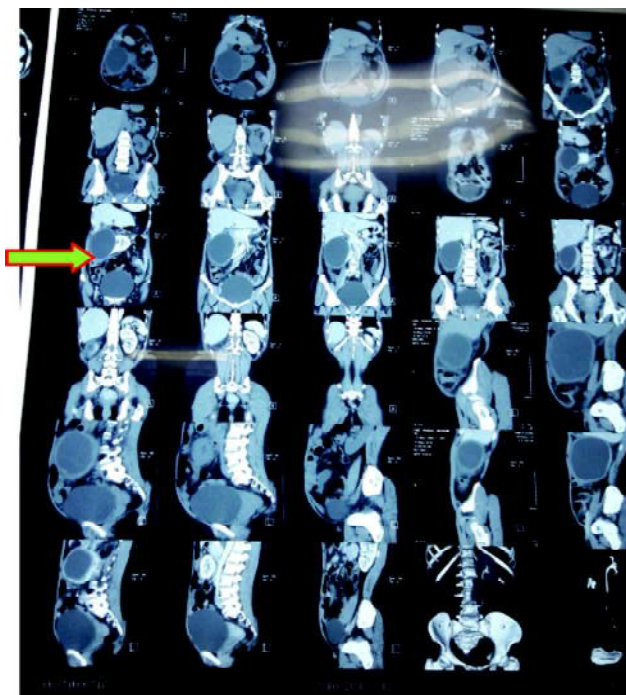


Fig.-1: CT Scan showing large renal cyst (right).

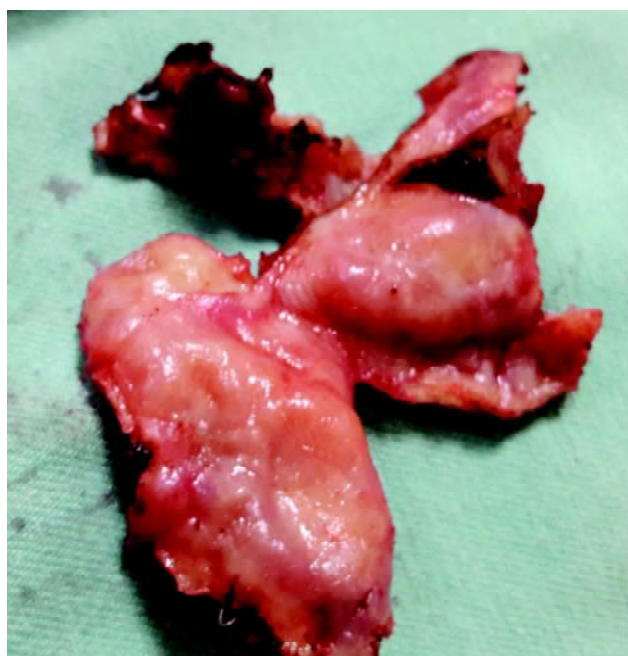


Fig.-2: Excised thick cyst wal.

Discussion

The Common urological presentation of renal hydatidosis is of chronic dull flank or lower back discomfort from cystic pressure, it rarely presents as with hydatiduria, ureteropelvic junction obstruction[2], and chronic renal failure[3]. Ultrasonography, CT, and



Fig.-3: Showing Multiple daughter cysts.

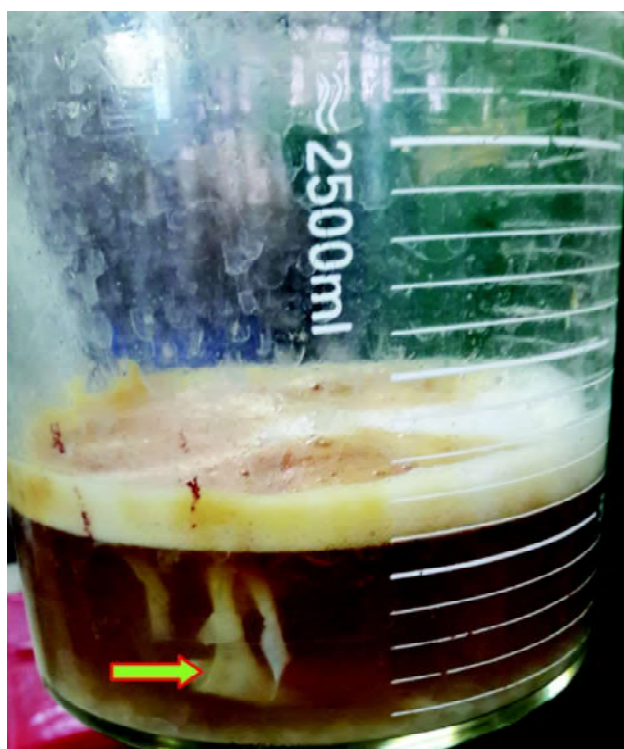


Fig.-4: Showing hydatid fluid contained daughter cysts.

serologic investigations have facilitated the diagnosis of renal hydatid cysts. US is the most appropriate method for the differential diagnosis of a renal cystic tumor with a sensitivity of 95% for diagnosis. It is safe and inexpensive. CT should be reserved for equivocal cases. Percutaneous aspiration of the cyst and

antihelminthic agents, such as mebendazole and albendazole, have also been used to treat hydatid disease, although these agents do not always sterilize cyst contents and have side effects. Danger of rupture or spillage of the highly antigenic contents precludes aspiration of hydatid cyst[4].

Surgical options for renal hydatid cyst include total excision, partial nephrectomy, partial cystectomy, followed by capittonage. Renal sparing surgery of partial excision is possible in 75% of cases[5]. Transperitoneal approach gives a better working space, which helped us to remain outside Gerota's fascia and prevent subsequent cyst rupture.

Conclusion

Laparoscopic treatment is feasible, safe, and as effective as its open counterpart. This case is unique as isolated renal hydatid is rare and there are very few reports of laparoscopic management for this entity.⁶ Extreme precaution should be taken during handling of the cyst to prevent contamination and anaphylactic reaction.

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