

Case Report

Recurrence of Renal Hydatid Cyst

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ABSTRACT

Hydatid cyst is a zoonotic disease caused by *Echinococcus granulosus*, transferred through the oral-fecal pathway by eating vegetables and food contaminated with dog stool containing eggs of the parasite. Hydatid cyst is most commonly found in the liver; however, dissemination can occur in other organs such as the lung and rarely in the heart, breast, thyroid, soft tissue of the neck, and kidney. The surgical approach remains the treatment of choice in hydatid. Meticulous handling of hydatid is important preoperatively and care should be taken against spillage of the contents and daughter cysts. In this case report, we report a case of recurrence of renal hydatidosis.

Keywords: Echinococcus; Hydatid cyst; Kidney

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INTRODUCTION

Hydatid cyst is a zoonotic disease caused by Cestoda *Echinococcus*, especially *Echinococcus granulosus*. The final hosts of the parasite are dogs and the intermediate hosts are the livestock such as cows, sheep, and goats. The infection is caused by the oral-fecal route and transferred by parasite eggs, mostly due to consuming infected vegetables and food by the stool of dogs containing eggs. The eggs are splitted in the intestinal duct; the larva enters the blood through the intestinal mucosa. Larvae of the parasite in intermediate hosts are capable to create cysts in all body organs.¹ Liver (50–70%) and lungs (20–30%) are mostly involved organs in hydatid cyst, but it is rarely seen in other organs like the heart, breast, thyroid, and the soft tissue of the neck and kidney.² Operation and using puncture, aspiration, injection, and re-aspiration (PAIR) are the most important and best treatment methods. Care should be taken against rupture of cyst and release of hydatid liquid containing protoscolex during the surgery.¹

CASE REPORT

A 32-year-old lady presented to the OPD with a history of dull aching pain in her left flank for one year. She had a history of

left simple nephrectomy five years back for a cystic disease of the kidney. Her physical examination, and blood and urine parameters were all normal. Ultrasound of the abdomen showed two univesicular cystic lesions in the left renal fossa. Contrast-enhanced CT scan of the abdomen was also consistent with the ultrasonographic findings (fig. 1) echinococcus antibody (IgG) was positive.

With the diagnosis of retroperitoneal recurrence of hydatidosis following spillage of hydatid contents during index surgery, the patient was put on oral Albendazole for two weeks. Exploratory laparotomy was then done through a midline incision. Retroperitoneum was approached after mobilization of descending colon through Toldt white line. A cystic mass measuring about 15 cms by 15 cms was visible on the medial aspect of the left retroperitoneum. Another cystic mass measuring about 10 cms by 10 cms was seen adherent to the inner aspect of the lateral abdominal wall. The operative field was isolated with 10% Povidone Iodine soaked surgical towels. The larger cyst was punctured, hydatid fluid aspirated, and 10% Povidone Iodine was injected and aspirated several times. The germinative membrane

of the cyst was then gently enucleated. The smaller cyst could be enucleated in toto from the surrounding muscle layers (fig. 2). The surgical field was irrigated meticulously with 10% Povidone Iodine. The perioperative period was uneventful. No recurrence was seen in six months follow-up on ultrasonography and the Echinococcal antibody test was negative.

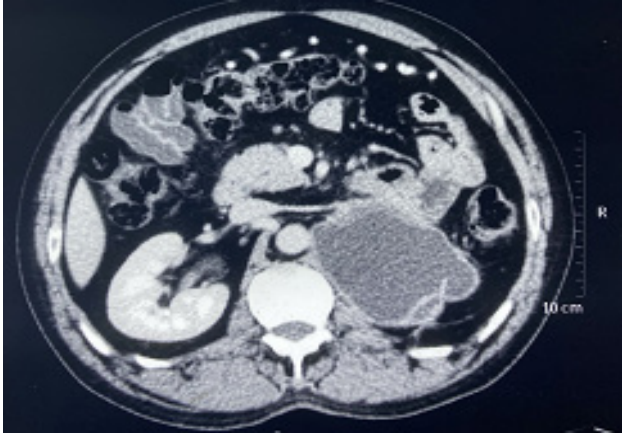


Figure 1: CECT showing a cystic structure in the left renal fossa

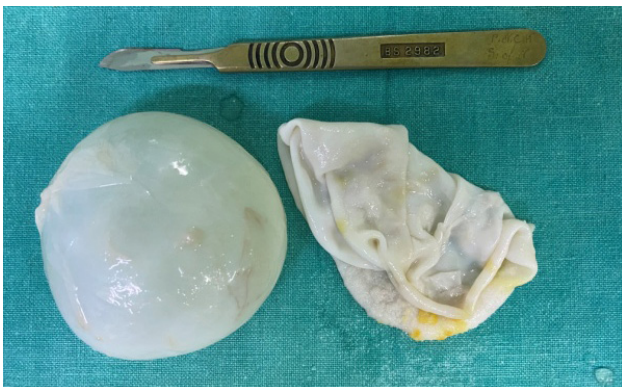


Figure 2: Cystectomy specimen

DISCUSSION

Recurrence of hydatid cysts is defined as the appearance of new and growing hydatid cysts after therapy.³ It includes reappearance and growth at the site of previously treated hydatid cyst or the appearance at a new distant site due to spillage.^{4,5} Our patient also had a history of the previous operation for cystic renal disease five years back, and recurrence of the disease now.

The two most important causes for recurrence are minute spillage of the hydatid cyst and inadequate treatment due to missing cysts and incomplete pericystectomy.⁶ The mainstay of the surgery for hydatid cyst is the isolation of the surgical field with surgical towels soaked with scolicidal agents, careful and patient removal of all cystic contents; and after intervention for the cyst, irrigating the cavity with a sufficient amount of scolicidal agents. Numerous solutions, such as hypertonic saline solution (15–30%), formalin (2%), silver nitrate (0.5%), povidone-iodine (10%), chlorhexidine (0.05%), and a combination of cetrimide (0.5%) and a chlorhexidine (0.4%), have been used as scolicidal agents for the purpose of inactivation.^{7,8}

CONCLUSIONS

Renal hydatid cyst should be one of the differential diagnoses of renal cystic lesions, especially where *Echinococcus* is endemic. Surgery remains the treatment of choice, with a mainstay of the surgery being isolation of the surgical field, injection of scolicidal agents into the cyst, meticulous removal of all cystic contents, and irrigation of the cavity with scolicidal agents; all to prevent recurrence of hydatidosis.

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