A giant renal hydatid cyst with pleural extension and epiploic localization management: A case report

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ABSTRACT

Hydatidosis is a rare parasitic disease that is endemic in many countries of the Mediterranean basin caused by the larval form of Echinococcus Granulosus. Among unusual localizations, renal involvement is rare, especially extension to the pleural cavity. Herein, we report a rare case of 75-year-old woman with giant renal hydatid cyst complicated by pleural extension. The patient was successfully treated with a median phreno-laparotomy. The renal hydatid cyst was completely emptied with resection of the epiploic hydatid cyst. The diaphragmatic breach was closed after resection of the necrotic margins. With 1 month albendazole therapy.

1. Introduction

Hydatidosis is an anthropozoonosis due to the development in humans of the larval form of Echinococcus granulosus and is endemic in many countries of the Mediterranean region such as Tunisia. Echinococcosis involving the renal parenchyma is a rare disease, which is more commonly seen in liver and lung. It remains clinically silent for a long time, and only presents at the stage of complications. We report an unusual clinical presentation of a large hydatid cyst of the right kidney complicated by pleural extension with an epiploic localization.

2. Case presentation

A 75-year-old female patient admitted for chronic abdominal pain with alteration of general state dating back to 18 months but without notion of fever; she is a sheep breeder, with a history of a lung hydatid cyst operated since 2014, the patient had an abdominal pelvic scan after 1 year of her chest surgery which showed in that time a simple renal cyst, then she was lost to follow-up. The examination objectified a sensitivity of the right lumbar and vitals were stable. Blood cell count showed eosinophilia 700 cells/cumm and hydatid serology was positive. A CT scan was carried out to reveal a voluminous hydatid cystic mass, oblong, with endo and exophytic development, extending upwards in the retoperitoneal space making a whole 25 * 5 cm surrounded by a longuette of healthy renal parenchyma: spur sign, fistulized in the right diaphragmatic dome and presenting on its upper side an exo vesiculation bulging in the pulmonary parenchyma with ventilatory disorders opposite (Fig. 1). The radiological features were compatible with renal hydatid cyst complicated by a pleural extension without other location. Chest CT scan didn’t demonstrate a lung cyst recidivism. The patient underwent median phreno-laparotomy which was the only approach to be able to access the entire lesion which extends from the abdominal cavity to the pleural cavity. We discovered a 2cm epiploic hydatid cyst which was entirely resected (Fig. 2). The renal hydatid cyst was completely emptied aspirate its contents and resect the protruding dome while preserving the renal parenchyma (Fig. 3). The diaphragmatic breach was closed after resection of the necrotic margins and Pleural hypertonic serum sterilization was performed before placing an aspirating chest tube. Patient underwent albendazole treatment 800 mg daily for two weeks prior to surgery. The evolution was marked by a resumption of activity after 10 days with no recurrence to date.

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3. Discussion

Hydatid disease is endemic in some Mediterranean countries produced by the larval stage of Echinococcus granulosus. According to WHO, 1 million people around the world are suffering from Cystic echinococcosis. Kidney is a relatively rare site. It is usually due to a disseminated echinococcosis, representing 3% of all visceral sites. Most common sites of hydatid cysts are the liver (more than 65%) followed by lungs (20%). The diagnosis of hydatid cyst of the kidney is suspected in epidemiological, clinical, radiological and biological arguments. It remains clinically silent for a long time and only presents at the stage of complications. There are various clinical presentations. Hydaturia which is observed in less than 30% of the cases, is the only pathognomonic sign. Eosinophilia and hydatid serology can be useful. Ultrasound can suspect the hydatid nature of the lesion. Computed tomography presents the modality of choice to identify the accurate location of the cyst and its relationships with surrounding organs and helps in the event of problem of differential diagnosis such as simple renal cyst in type I or renal tumor in type IV. Its diagnostic sensitivity is near to 98%. Medical treatment may be offered alone in some cases but surgical treatment is considered to be the only curative treatment for hydatid cyst.

4. Conclusion

The hydatid cyst of the kidney is a rare localization, with rich but rarely specific symptoms. The diagnostic of renal hydatic cyst should always be considered even if ultrasonography points to a simple cyst especially if epidemiological, and biological arguments are united to avoid complications such as pleural fistula, kidney destruction or communication with the excretory tract.

Laparoscopic and laparotomy resection can both be performed, depending the cyst size, extension, and complications. In our case, laparotomy was chosen because of pleural extension and giant cyst character. Furthermore, median laparotomy allows the surgeon to ensure a better exploration of the peritoneal cavity even pleural cavity through a phrenotomy such as in our case. Conservative surgery is not correlated with a higher risk of recurrence if all the contents of the cyst are emptied. Preoperative and postoperative one-month courses of albendazole 800mg daily should be considered in order to decrease the chance of anaphylaxis and decrease the tension in the cyst wall.

Medical treatment may be offered alone in some cases but surgical treatment is considered to be the only curative treatment for hydatid cyst.

Fig. 1. A giant renal hydatid cyst complicated by a pleural extension.

Fig. 2. Epiploic hydatid cyst.

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Declaration of competing interest

No conflict of interest to be noted.

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