

RESEARCH ARTICLE

HYDATID LIVER CYST COMPLICATED BY SEPTIC PYLEPHLEBITIS : A CASE REPORT

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Manuscript Info Abstract

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*Key words: -*Hydatid Cyst, Liver, Rupture, Imaging The hydatid cyst is a public health problem in high endemic countries where Morocco is no exception. We report an exceptional case of a complicated hydatid cyst of septic pylephlebitis in a young man. The diagnosis is suspected pre-operatively given the background, the patient's origin (endemic area) and the data from the imagery performed.

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Introduction:-

Hepatic hydatidosis is an endemic parasitic disease caused by Echinococcus granulosus (1), which is quite common in the Maghreb countries (1,2). Its clinical manifestations are variable and its complications can jeopardize the vital prognosis of patients. Its mechanical invasiveness on the bile ducts is conventionally known, however its swarming and its latent development inside the portal venous system remains exceptional. Vascular complications are therefore burdened with significant mortality and are most often discovered intraoperatively.

Through our case, we will illustrate the clinical features and the value of imaging in the diagnosis of this rare complication of the hydatid cyst of the liver.

Patient and Observation:-

Mr SM, 38 years old, with no pathological history, consults for pain in the right hypochondrium in a febrile context with deterioration of general condition. The clinical examination found a sensitivity of the right hypochondrium with a fever numbered at 40 °c. On the biological analysis, we had a CRP at 180 mg/l with a leukocytosis at 19,000/mm3. The abdominal scanner showed a dysmorphic liver with hypertrophy of segment I and the seat at the level of segments VIII, VII, and VI of a liquid density formation, multiloculated, with a finely calcified clean wall measuring 84mm of long axis, classified IV of GHARBI. This formation communicates with the right posterior portal branch and extending to the portal bifurcation with replacement of the portal trunk by a portal cavernoma (Figure 1). A hepatic MRI supplement made it possible to reinforce the data of the scanner by highlighting a mass in hyposignal T1, hypersignal T2 with a wall not raised after injection testifying to its liquid nature. This mass arrives at the portal bifurcation filling the portal trunk with the development of a cavernoma and is associated with dilation of the splenic vein and splenomegaly with a thickened wall of the intrahepatic bile ducts (Figure 2). Faced with these findings, the surgical treatment was rejected and the patient was put on medical treatment based on anthelminthics (Zentel® at a rate of 400 mg per day, 3 weeks out of 4) and anticoagulant. The evolution was favorable.

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Discussion:-

The hydatid cyst of the liver is a parasitic affection due to the development of the larval form of the taenia of the dog Echinococcus granulosus. This pathology remains frequent and constitutes a public health problem in high endemic countries.

It is favored by poor hygienic conditions, certain customs and promiscuity with dogs and sheep. Man accidentally becomes infected by entering the evolutionary cycle of the worm through digestive contamination. Besides the hepatic and pulmonary localizations which are the most frequent (2,3).

The clinical aspects of hydatid cyst of the liver are very diverse. Infectious, biliary and thoracic complications are present in 40% of cases [2].

Unlike opening in the bile ducts, vascular complications of hydatic cysts of the liver are rare, estimated at 0.8% according to a multicenter study [1] but burdened with significant operative mortality. These complications can be compression or rupture. The rupture in the portal venous system remains an exceptional complication.

During its development and in the absence of treatment, the hydatid cyst of the liver can end up compressing the nearby hepatic structures. Compression of intra or perihepatic vascular structures (portal trunk, its branches, hepatic vein and inferior vena cava) is most often latent and well tolerated. When this is symptomatic, various clinical condition can be made: clinical condition of portal hypertension, a lower vena cava syndrome and Budd Chiari syndrome.

The diagnosis was established preoperatively on radiology data.

The ultrasound presents the first-line examination, which is non-invasive, repetitive and inexpensive. Ultrasound usually shows a type III or IV of hydatid cyst of the liver according to the classification of GHARBI, dilated intraand extrahepatic bile ducts, anechoic material in the main bile duct and sometimes the cystobiliary fistula itself. It also allows the search for a biliary pathology associated with type of vesicular lithiasis or main bile duct.

Most of the time, doppler ultrasound supports the diagnosis, by showing signs either in favor of a portal vena thrombosis taking the aspect of an echogenic content at the level of the portal trunk with absence of flow and visualization. multiple serpiginous structures of variable size related to portal cavernoma.

The usual aspects of the hydatid cyst with abdomino-pelvic location are classified into five types from 1 to 5 according to GHARBI [4,5]:

- 1. pure liquid mass.
- 2. split wall by detachment of the membranes.
- 3. stovepipe honeycomb collection
- 4. heterogeneous echostructure formation corresponding to an altered, infected cyst.
- 5. formation with dense walls corresponding to a calcified cyst

CT:

Carried out in second intension, it is performed out before and after injection of product of contrast. It makes it possible to specify, better than ultrasound, the size and the topography. The scanner also provides relevant data on the relationships of the cyst with neighboring organs, with the bile ducts and especially with the portal pedicles and the hepatic veins. It can directly highlight biliocystic communication resulting in an interruption of the cystic wall near a dilated bile duct. A dilation of intra hepatic duct and main biliar duct are found most of the time (6). Finally, the CT scan has probably become essential for surgical management (6,7).

MRI:

The indications for MRI in hydatid pathology are few, it is mainly biliary and vascular complications. Doppler MRI confirms the presence of cystic lesions in the portal venous system. It can be useful for characterizing certain cysts where the liquid component is accompanied by detachment of GHARBI type II membranes.

Bili-MRI is currently the technique of choice for exploring the bile ducts. It allows an extremely precise morphological assessment of the biliopancreatic tree (8,9).

ERCP:

Endoscopic retrograde cholangio-pancreatography theoretically allows the opacification of a possible bilio-cystic fistula, but the indication is mainly therapeutic. The endoscopic sphincterotomy (10,11), associated or not with a naso-biliary drainage, allows the drainage of the bile ducts. In selected cases, endoscopic sphincterotomy alone allows healing without the need for surgery (11).

Chest x-ray:

It may show an elevation of the right diaphragmatic dome or reactive pleurisy. It makes it possible to search for associated pulmonary locations.

Treatment of ruptured hydatid cyst of the liver in the portal venous system remains surgical and can be summed up, most often by curing hydatid cyst of the liver by resection of the prominent dome, which must be done at a distance from the Glisson capsule to avoid hemorrhage (12). In the event of exceptional thrombosis of the hepatic veins with a totally intra-parenchymal hydatid cyst of the liver inaccessible, depending on the calcification or not of the pericyst, it would be necessary to discuss a percutaneous rescue puncture [89], or to resolve to a first diversion. Three-month postoperative anti-parasitic treatment is useful to prevent the risk of possible subsequent peritoneal echinococcosis.

Conclusion:-

The hydatid liver cyst complicated by pylephlebitis is a rare and serious complication burdened with significant mortality. Imaging makes it possible to specify the relationships of the hydatid cyst with the bile ducts and especially with the portal pedicles.

Conflicts of interest and authors' contributions:

The authors do not declare any conflict of interest. All the authors contributed to this work, read and approved the final version of the manuscript.

Legend:



Figure 1: - Abdominal CT in axial sections before (a, b) and after injection of the contrast medium (c, d): highlights a hepatic lesion of liquid density, with a finely calcified wall measuring 84mm long axis, not enhanced after injection, classified IV of GHARBI. This lesion formation communicates with the right posterior portal branch and extending up to the portal bifurcation with development of serpiginous vascular structures at the level of the hepatic hilum in relation to portal cavernoma.



Figure 2: - Abdominal MRI axial sections before (1,2) and after injection of the contrast medium (3,4) in T2 sequence: showing a dysmorphic liver with bumpy contours, located at the level of segments VIII, VII and VI of a mass in T2 hypersignal with clean wall not enhanced after injection. This mass extends to the right posterior portal branch and to the portal bifurcation. It is associated with dilation of the splenic vein and splenomegaly.

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