

Hydatid Cysts of the Liver Fistulised in the Bile Ducts: 05 Cases

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Abstract

Original Research Article

Fistulised hydatid cysts in the bile ducts represent the most serious complication of this benign disease. This is a retrospective study reporting five (05) cases out of twenty-four (24) patients, i.e. 20.83%, treated over a period of four (04) years for fistulised hydatid cysts in the bile ducts in our hospital (Gastroenterology and Visceral Surgery) at the Moulay Ismail Military Hospital in Meknes, Morocco, from 1 January 2018 to 31 December 2021. There were 03 men and 02 women (sex ratio: 1.5). The mean age was 50 years, with extremes ranging from 35 to 66 years. The clinic was dominated by pain in the right hypochondrium and cholestatic jaundice in all patients (100%). Hydatid serology was positive in all patients (100%). Medical imaging enabled us to make the diagnosis. The right liver was the most affected, i.e. 60% of patients. Endoscopic retrograde cholangio-pancreatography with endoscopic sphincterotomy (extraction of the membranes) followed by surgery (resection of the protruding dome, simple direct suture of the fistulae using 2/0 Vicryl X-stitches, followed by padding of the residual cavity and drainage of the cystic cavity) were our main methods of treatment.

Keywords: Fistulised hydatid cysts, benign disease, Gastroenterology, Hydatid serology.

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INTRODUCTION

Hepatic hydatidosis or hydatid cyst of the liver (HCH) is a common disease in highly endemic livestock farming areas such as the Maghreb and the Middle East [1]. Although it remains a benign condition, its natural history is often marked by complications that can be life-threatening, including an opening in the bile ducts, which is a turning point in its natural history [1]. Hydatid cysts of the liver open in the bile ducts (KHOVB) are defined by the presence of a large kysto-biliary fistula (LFKB) measuring 5 mm or more [2,3]. In two thirds of cases, this large fistula allows the passage of small daughter vesicles or debris from hydatid membranes [4], a feature that some people require to be included in the strict definition of KHOVB [5]. Whether or not there is a large kysto-biliary fistula is the decisive factor, as it correlates strongly with postoperative morbidity, hence the importance of rapid diagnosis followed by appropriate treatment. Positive diagnosis of KHOVB is based on morphological examinations, in particular ultrasound, CT and MRI, which enable cysts to be visualised and complications to be suspected. Hydatid serology continues to play an

important role in the diagnostic strategy, particularly in detecting hydatid recurrence after treatment. Therapeutic choices therefore need to be well structured and codified, in particular ERCP and surgery.

MATERIALS AND METHODS

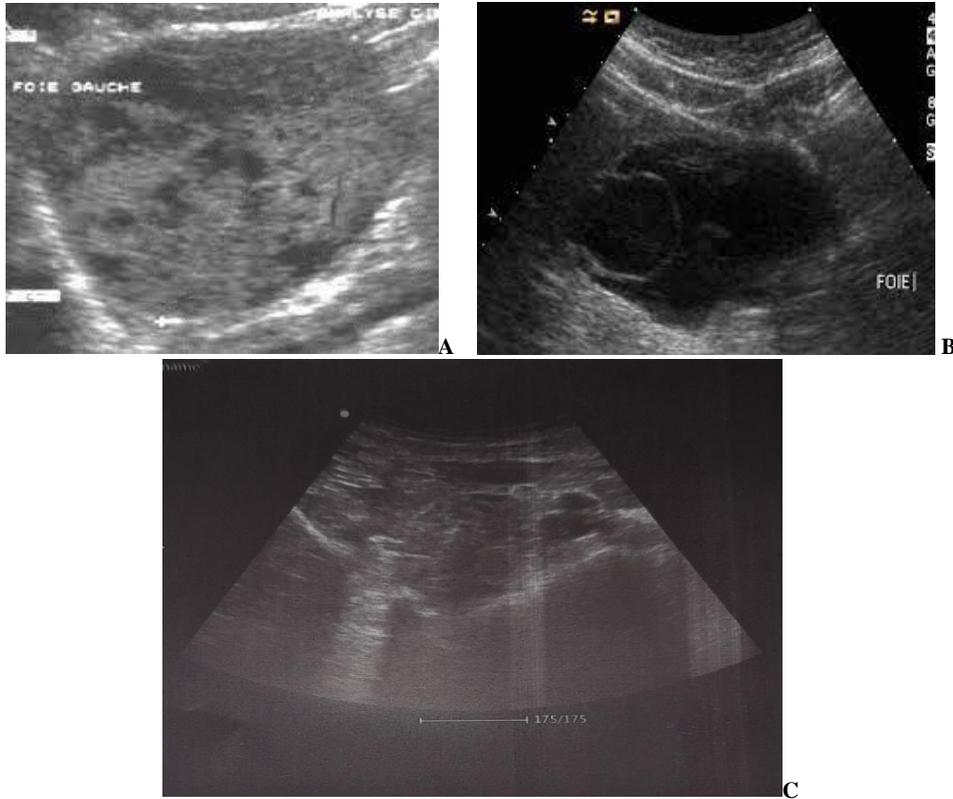
This is a retrospective study of 05 consecutive patients, followed for hydatid cysts of the liver fistulized in the bile ducts (KHOVB), managed in our hospital structure (Gastroenterology and Visceral Surgery of the Military Hospital Moulay Ismail of Meknes) during a period of four (04) years from January 1, 2018 to December 31, 2021.

Patients

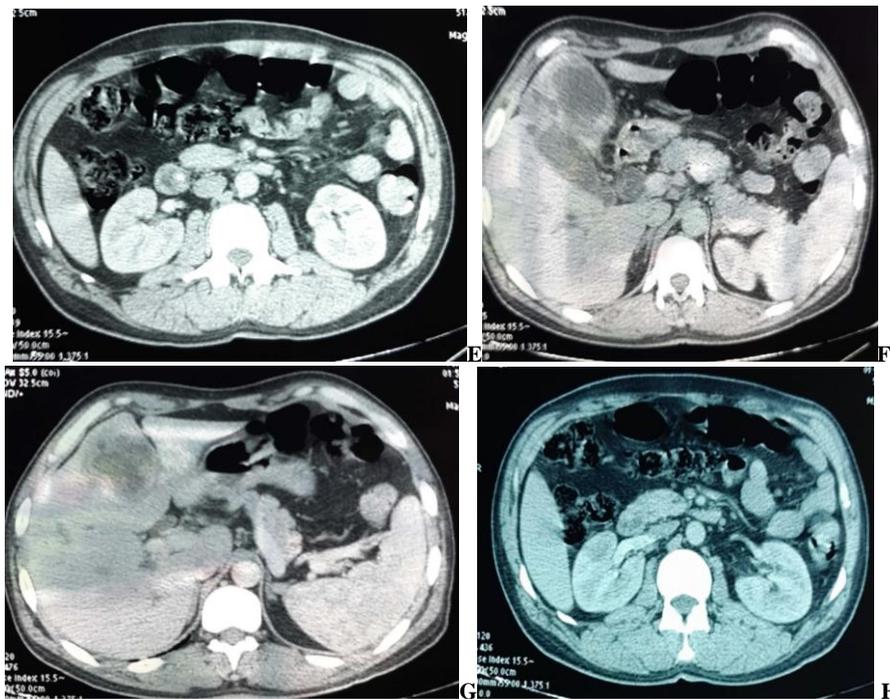
There were 03 men and 02 women (sex ratio: 1.5), with an average age of 50 years (35 to 66 years), the reason for consultation was pain in the right hypochondrium followed by jaundice in all patients (100%). All patients had biological cholestasis, associated with cytolysis in two patients (40%), and hydatid serology was positive in all patients (100%). All our patients had undergone abdominal ultrasound,

the results of which were: single hydatid cyst in 03 patients (60%) and double in 02 patients (40%), located in the right liver in 03 patients and the left liver in 02 patients. In Gharbi's echographic classification, the distribution was as follows: 04 cases for type 3 and a single case for type 4. Ultrasound showed dilatation of

the bile ducts in 100% of our patients (*Figures 1: A, B and C*). All our patients had also undergone abdominal CT scans confirming rupture of the hydatid cyst in the bile ducts with the presence of parasitic membranes in the common bile duct (*Figures 2: D, E, F and G*).



Figures 1(A, B and C): Abdominal ultrasound showing KHF with dilatation of the bile ducts. HMMI-Meknes Imaging Department



Figures 2 (D, E, F and G): Abdominal CT scan confirming rupture of the hydatid cyst in the bile ducts with the presence of parasitic membranes in the common bile duct. HMMI-Meknes Imaging Department

Treatment

In our series, all our patients had undergone ERCP and surgery. **ERCP** was performed in the Gastroenterology Department, which demonstrated the

presence of parasite membranes (Figures 3: H and I), followed by endoscopic extraction using an extraction balloon (Figures 4: J and K).



Figures 3 (H and I): ERCP: Presence of parasitic membranes in the bile ducts. Gastroenterology Department, Moulay Ismail Military Hospital, Meknes



Figures 4 (J and K): ERCP: Biliary tract after extraction of parasitic membranes Gastroenterology Department, Moulay Ismail Military Hospital, Meknes

Surgery, the right subcutaneous incision was made in three (03) patients and medial incision in two (02) patients. After protection with hydrogen peroxide soaked drapes, the cyst was punctured with a large trocar, the puncture fluid was stained with bile, the biliary fistula was evident in all our patients (100%). The parasite was sterilised with hydrogen peroxide, and resection of the protruding dome was performed in all our patients (100%). Intracystic biliary fistulas were identified by careful exploration of the remaining cystic cavity. Treatment consisted of a simple direct suture using 2/0 Vicryl X-stitches, followed by lining of the residual cavity and drainage of the cystic cavity. We also performed cholecystectomy in all our patients. Post-operative management was straightforward in all our patients.

DISCUSSION

During the course of our study, we operated on twenty-four (24) patients with hydatid cysts of the liver (HCH) in the department, including five (05) cases of hydatid cysts fistulised in the bile ducts, i.e. 20.83%. Complications of hydatid cysts of the liver can be inaugural and vary according to region and series. They are largely dominated by cystic ruptures in the bile ducts, which constitute a fairly serious and frequent complication (17 to 44%) of hydatid cysts of the liver. In our series it was 20.83%. This result is comparable to that of Hanane Delsa *et al*, who reported 22.38% of cases in the digestive endoscopy department of the Hôpital Universitaire Cheikh Khalifa Casablanca, Morocco in 2022[6]. The right side was most affected in our study. Clinical symptoms in our study were

dominated by pain in the right hypochondrium followed by jaundice. In contrast to the study by Mountassir Moujahid and Mohamed Tarik Tajdine, latent forms were the most common [7]. Medical imaging enabled the diagnosis to be made in all cases.

Computed tomography is used to determine the exact relationship between the cyst and the vascular and biliary pedicles [8,9], and to visualise hydatid debris in the VBP. Cholangio-MRI is the technique of choice in the exploration of the bile ducts [8,10,11], unfortunately this exploration technique was not performed in our study. In recent years, ERCP with endoscopic sphincterotomy has become the safe and effective method of choice for the treatment of ruptured liver hydatid cysts with bilio-bronchial or bilio-hepatic fistula [12, 13]. Interventional endoscopy plays a major role in the management of biliary emergencies and complications, with less morbidity than surgery [14]. Surgery after sphincterotomy was performed in all our patients by resection of the protruding dome, which is a simple, rapid, low-bleeding method but a source of fairly significant morbidity [11, 15,16], a simple direct suture using X-stitches with 2/0 Vicryl, completed by padding of the residual cavity and then, drainage of the cystic cavity.

CONCLUSION

ERCP with endoscopic sphincterotomy is currently a useful and safe procedure for the diagnosis and, above all, the treatment of biliary complications of hepatic hydatidosis. It also allows emergency management of angiocholitis, which is the main complication found in our patients. The efficacy of endoscopic treatment has been confirmed with a lower morbi-mortality than radical surgery, therefore it should be offered as first-line and constitute the treatment of choice for angiocholitis on ruptured hydatid cyst in the main bile duct.

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