International Journal of Clinical Science and Medical Research

ISSN(print): 2770-5803, ISSN(online): 2770-582X

Volume 06 Issue 03 March 2026

DOI: https://doi.org/10.55677/IJCSMR/V6I3-01/2026, Impact Factor: 8.005

Page No : 39-41

Role of ERCP in The Management of Biliary Complications of Hepatic Hydatid Cysts

M. Tahiri[1], A.L. Cheikh Baye[1], H.H. Abakar[1], Z. Boukhal[1], F.Z. El Rhaoussi[1], F. Haddad[1], W. Hliwa[1], A. Bellabah[1], W. Badre[1]

[1]Department of Hepato-Gastroenterology, Ibn Rochd University Hospital, Casablanca, Morocco

ABSTRACT

Hepatic hydatid cysts, caused by *Echinococcus granulosus*, frequently complicate via rupture into the biliary tract, presenting a major therapeutic challenge. This retrospective study (2019–2023) evaluated the efficacy of endoscopic retrograde cholangiopancreatography (ERCP) with endoscopic sphincterotomy in managing eight patients with cystobiliary fistulization. All patients presented with acute cholangitis and cholestasis. Endoscopic extraction of hydatid material was universally successful, leading to the resolution of jaundice within 5 to 12 days. No post-procedural complications were observed. The study concludes that ERCP is a highly effective, safe, and minimally invasive first-line treatment for biliary complications of hepatic hydatid disease, superior to traditional surgery.

Published Online: March 16, 2026

KEYWORDS:

Hepatic hydatid cyst, ERCP, Endoscopic sphincterotomy, Biliary complications, Cystobiliary fistula, Acute cholangitis.

INTRODUCTION

Hepatic hydatid cyst (HHC) is a parasitic disease caused by the development of the larval form of the dog tapeworm Echinococcus granulosus. This condition remains frequent and represents a major public health problem in highly endemic countries. The most common complication is rupture into the biliary tract. Currently, endoscopic retrograde cholangiopancreatography (ERCP) with endoscopic sphincterotomy is considered the treatment of choice. The aim of this study was to evaluate the effectiveness of ERCP in the management of hepatic hydatid cysts ruptured into the biliary tree.

PATIENTS AND METHODS

This was a retrospective and descriptive study conducted between January 2019 and August 2023, including patients presenting with hepatic hydatid cysts complicated by biliary fistulization. ERCP with endoscopic biliary sphincterotomy was performed in all patients.

RESULTS

During the study period, eight cases of hepatic hydatid cyst rupture into the biliary tract were recorded. The mean age was 39.6 ± 14.4 years, with a female-to-male ratio of 1.6. Three patients initially underwent surgical treatment, whereas five patients received endoscopic treatment as first-line therapy. All patients presented with acute cholangitis. Biological investigations revealed cholestasis in all cases, and hydatid serology was positive in all patients. Abdominal imaging demonstrated cystic liver lesions associated with biliary duct dilatation in all cases. ERCP revealed a cystobiliary fistula in two patients and filling defects within the common bile duct in all patients, consistent with hydatid material. Endoscopic sphincterotomy was performed in all patients, allowing extraction of hydatid debris using an extraction balloon. Clinical outcome was favorable, with resolution of jaundice within an average of 5 to 12 days following the endoscopic procedure. No post-ERCP complications were observed.

Corresponding Author: A.L. Cheikh Baye

Cite this Article: Koko, M. Tahiri, A.L. Cheikh Baye, H.H. Abakar, Z. Boukhal, F.Z. El Rhaoussi, F. Haddad, W. Hliwa, A. Bellabah, W. Badre (2026). Role of ERCP in The Management of Biliary Complications of Hepatic Hydatid Cysts. International Journal of Clinical Science and Medical Research, 6(3), 39-41. https://doi.org/10.55677/IJCSMR/V6I3-01/2026

Figure 1: Endoscopic extraction of hydatid cyst membrane using balloon.

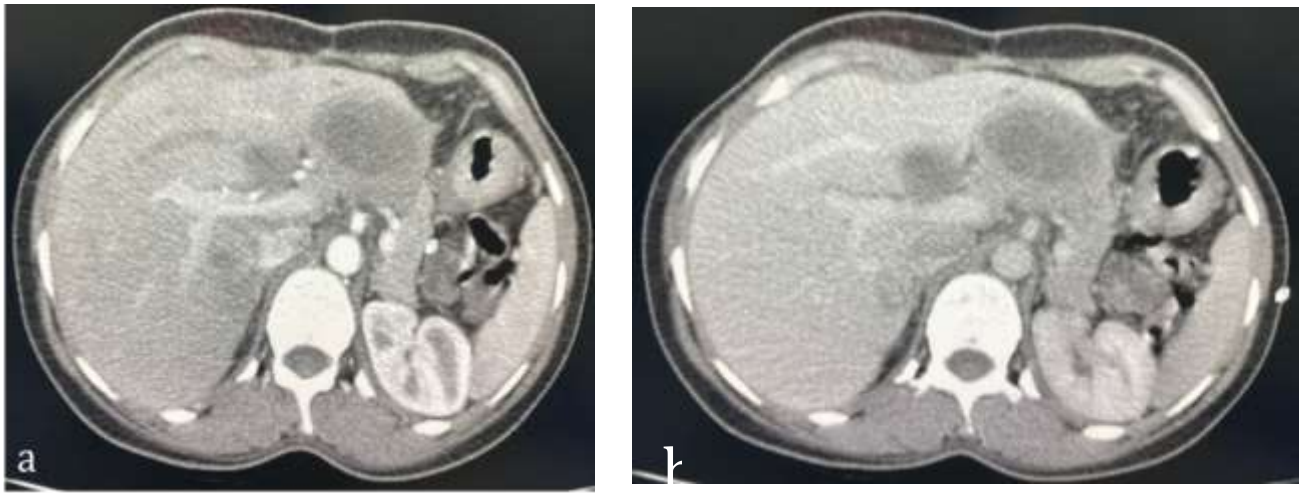

Figure 2 (a–b). Contrast-enhanced CT, axial sections obtained after contrast injection: arterial phase (a) and portal venous phase (b), showing a hepatic hydatid cyst ruptured into the biliary tree.

DISCUSSION

Rupture of hepatic hydatid cysts into the biliary tract is the most frequent and most feared complication of hepatic hydatidosis. It occurs in 17–44% of operated hydatid cysts, particularly in endemic areas [1,2]. This high incidence is explained by the anatomical proximity between the cyst and the biliary tree, as well as the progressive increase in intracystic pressure during the natural course of the disease. In our series, all patients presented with acute cholangitis, reflecting biliary obstruction caused by hydatid material. This clinical presentation is widely reported in the literature as the most common mode of presentation of intrabiliary rupture, followed by obstructive jaundice and, less frequently, acute pancreatitis [3]. Atli et al. reported cholangitis in 60–90% of cases of cystobiliary rupture [4], which is consistent with our findings. Biological abnormalities typically include cholestasis associated with moderate cytolysis, observed in all our patients. These findings are consistently reported in published series and represent an important diagnostic clue [5]. Positive hydatid serology, although not specific for complications, supports the etiological diagnosis in endemic settings. From a diagnostic standpoint, abdominal ultrasonography and computed tomography are first-line imaging modalities for identifying hepatic hydatid cysts and biliary dilatation. However, their sensitivity for detecting cystobiliary fistulas is limited. Magnetic resonance cholangiopancreatography (MRCP) is currently considered the reference non-invasive technique for biliary tract evaluation, with excellent sensitivity for detecting intrabiliary hydatid debris [6]. In our series, MRCP confirmed the diagnosis prior to ERCP, in agreement with literature data. Historically, surgery was the reference treatment for biliary complications of hepatic hydatid disease. It involved exploration of the common bile duct, removal of hydatid material, and management of the hepatic cyst, at the cost of significant morbidity [7]. Since the 1990s, ERCP has progressively emerged as an effective and less invasive therapeutic alternative. Several studies have demonstrated the

efficacy of ERCP with endoscopic sphincterotomy in managing intrabiliary ruptures. In a series of 25 patients, Atli et al. reported a clinical success rate of 88%, with rapid resolution of jaundice and biliary infection after extraction of hydatid material [4]. Similarly, Dolay et al. showed that ERCP allowed complete symptom resolution in 80–100% of patients, either as exclusive treatment or as a bridge to delayed surgery [8]. In another study including 28 patients with cystobiliary fistulas, ERCP combined with sphincterotomy and biliary drainage resulted in spontaneous fistula closure in all cases, with a mean delay of 11 days [9]. Our results are comparable to those reported in the literature. ERCP enabled successful extraction of hydatid material in all patients, with resolution of jaundice within 5 to 12 days and no post-procedural complications. The absence of post-ERCP pancreatitis or bleeding in our series confirms the favorable safety profile of this technique when performed by experienced teams, as reported in other studies where complication rates do not exceed 5–10% [10]. Another notable finding in our series was the very long delay between initial surgical treatment of hepatic hydatid cysts and the occurrence of biliary complications, reaching up to 20 years in some patients. Although rare, such late presentations have been described in isolated case reports, highlighting the need for long-term follow-up of patients operated on for hydatid disease [11].

CONCLUSION

ERCP with endoscopic sphincterotomy is currently a valuable procedure for the treatment of biliary complications of hepatic hydatid disease. Our study confirms its effectiveness and superiority over surgical treatment. It allows shorter hospital stays and reduces procedure-related morbidity.

REFERENCES

1. Organisation mondiale de la Santé – Échinococcose (données épidémiologiques mondiales)
2. https://www.who.int/news-room/fact-sheets/detail/echinococcosis
3. Brunetti E, Kern P, Vuitton DA.
4. Expert consensus for the diagnosis and treatment of cystic echinococcosis.
5. PubMed : https://pubmed.ncbi.nlm.nih.gov/18335809/
6. Atli M, Kama NA, Yuksek YN, et al.
7. Intrabiliary rupture of a hepatic hydatid cyst: associated clinical factors and proper management.
8. PubMed : https://pubmed.ncbi.nlm.nih.gov/16442947/
9. Dolay K, Akbulut S, Ersan Y, et al.
10. Endoscopic sphincterotomy in the management of postoperative biliary fistulas after hydatid liver surgery.
11. PubMed : https://pubmed.ncbi.nlm.nih.gov/14528213/
12. Akcan A, Akyildiz H, Artis T, et al.
13. Perforation of hydatid cysts of the liver into the biliary tract.
14. PubMed : https://pubmed.ncbi.nlm.nih.gov/17036483/
15. Lewall DB.
16. Hydatid disease: biology, pathology, imaging and classification.
17. PubMed : https://pubmed.ncbi.nlm.nih.gov/3512410/
18. Dziri C, Haouet K, Fingerhut A.
19. Treatment of hydatid cyst of the liver: where is the evidence?
20. PubMed : https://pubmed.ncbi.nlm.nih.gov/16311838/
21. Tasev V, Dimitrov R, Draganov K.
22. Endoscopic management of biliary complications of hepatic hydatid disease.
23. PubMed : https://pubmed.ncbi.nlm.nih.gov/22725113/
24. Manouras A, Genetzakis M, Antonakis PT, et al.
25. Endoscopic treatment of intrabiliary rupture of hydatid cyst of the liver.
26. PubMed : https://pubmed.ncbi.nlm.nih.gov/26345677/
27. Revue générale – complications biliaires du kyste hydatique (PMC)
28. https://pmc.ncbi.nlm.nih.gov/articles/PMC9338722/