



## The Pigtail Stenting Treatment for the Biliary Leakage after the Liver Hydatid Cyst Operation: A Case Report

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### Abstract

Echinococcus granulosus commonly involve the liver and are mostly seen in Turkey. One of the early complications following the surgery for liver hydatid cyst is biliary leakage. Endoscopic sphincterotomy and biliary stenting are usually successful in treating biliary leakage. In this case, I'm presenting endoscopic treatment for the biliary leakage after the liver hydatid cyst operation.

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**Keywords:** ERCP, hydatid cyst, biliary leakage, biliary stenting

### Introduction

The incidental hosts of Echinococcus granulosus are humans in which the definitive hosts are canines.<sup>1</sup> E. granulosus commonly involve the liver and are mostly seen in Turkey.<sup>2,3</sup> One of the early complications following the liver hydatid cyst surgery is biliary leakage, which's incidence is %4.5-26.<sup>4,5</sup> Endoscopic sphincterotomy and biliary stenting are usually successful in treating biliary leakage. Here, I presented endoscopic treatment for the biliary leakage after the liver hydatid cyst operation.

### Case Report

The patient was a 43 years old man. He had upper abdominal pain for 4-5 months in September 2020. He had gone to the hospital for this complaint, and he was diagnosed with liver cyst hydatid. He had no comorbid disease or medications. In his abdominal magnetic resonance imaging (MRI), the cysts were involved the right lob anterior and left lob medial segments, which were nearly 175x12x148 mm complex and multiple (Figure 1). He had surgery for his liver hydatid cyst on 4 November 2020. The partial cystectomy and omentopexy were done and drained the cyst in the left lobe externally (Figure 2). The patient has consulted me because of the bile ooze from



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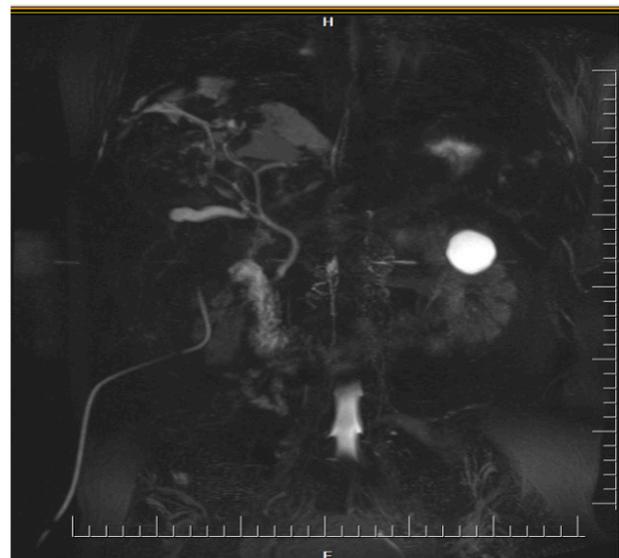
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**Figure 1.** MRI of the patient before surgery



**Figure 2.** MRI of the patient after surgery



**Figure 3.** Biliary stent in ERCP imaging

the surgical drain on 24 November 2020. There was 500 cc bile from the drain. The abnormal values were direct bilirubin, alkaline phosphatase (ALP), and gamma-glutamyl transferase (GGT) in his laboratory finding. Direct bilirubin was 0.74 mg/dL (0-0.5 mg/dL). ALP was 173 U/L (NR: 40-150). GGT was 126 IU/L (NR: 12-64). The endoscopic retrograde cholangiopancreatography (ERCP) showed BL into the left lobe. Choledocus was normal. The ES was carried out. The pig

tale stent 10 Fr 8 cm was placed to the cyst distal (Figure 3). He was treated with albendazole 400 mg twice a day for a month. After one week in his follow-up, there was 20-30 cc fluid without bile in his drain. The control of the ALP, GGT, and total bilirubin values was normal.

### Discussion

Echinococcus granulosus commonly involves

the liver.<sup>2,3</sup> most of the disease symptoms are fever, pain, jaundice, and abdominal mass. As in the case, the patient had abdominal pain. Medical therapy is effective only with surgery. The principal mode of treatment is surgery. The biliary leakage, which develops because of communication between the residual cyst cavity and the biliary tree, could be manifested in the postoperation.<sup>6</sup> ERCP is a therapeutic method to treat biliary leakage. It is safe and effective. Endoscopic sphincterotomy and biliary stenting are usually successful in treating biliary leakage.<sup>7</sup> Endoscopic sphincterotomy and biliary stenting decrease the pressure in the biliary tract. The time for closure of the fistula is reduced.<sup>8,9</sup> The biliary stenting is more effective, especially in patients with a narrow choledochus and high fistula output.

Most of the postoperative hydatid cyst complication is biliary leakage. Biliary leakage occurs typically within two of four weeks of surgery. Endoscopic technics such as endoscopic sphincterotomy and biliary stenting are commonly effective in treating the biliary fistula. As in the case, the time from endoscopic sphincterotomy and biliary stenting to the biliary fistula's closure is reported to be 3-21 days.

### Conflict of Interests

Authors declare that there are none.

### Acknowledgment

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### References

1. Srinivasan S, Slomovic AR. Sjögren syndrome. Compr Eckert J, Deplazes P. Biological, epidemiological, and clinical aspects of echinococcosis, a zoonosis of increasing concern. Clin Microbiol Rev. 2004 Jan;17(1):107-35. doi: 10.1128/cmr.17.1.107-135.2004.
2. Echinococcosis. In: Feldman M, Friedman L, Brandt LS, eds. Sleisenger and Fordtran's Gastrointestinal and Liver Disease. 10th ed. Philadelphia: Elsevier; 2016:1386-8.
3. Hydatid disease. In: Feldman M, Friedman LS, Brandt LJ, eds. Surgery of the Liver and Biliary Tract, 2nd ed. Philadelphia: WB Saunders Company; 2000:1167-204.
4. Yazar S, Özkan AT, Hökelek M, Polat E, Yılmaz H, Özbilge H, Üstün □, Kolta □ □ S, Ertek M, □ akru N, Alver O, Çetinkaya Z, Koç Z, Demirci M, Akta □ H, Parsak CK, Özerdem D, Sakman G, Cengiz ZT, Özer A, Keklik K, Yemenici N, Turan M, Da □ tan A, Kaya E, Tamer GS, Girginkarde □ ler N, Türk M, Sınırta □ M, Evci C, Kılıçturgay S, Mutlu F, Art □ T. Türkiye'de 2001–2005 yılları arasında kistik ekinokokkozis. Türkiye Parazitoloji Dergisi. 2008;32(3):208-20 (in Turkish).
5. Safioleas M, Misiakos E, Manti C, Katsikas D, Skalkeas G. Diagnostic evaluation and surgical management of hydatid disease of the liver. World J Surg. 1994 Nov-Dec;18(6):859-65. doi: 10.1007/BF00299087.
6. Kayaalp C, Bzeizi K, Demirbag AE, Akoglu M. Biliary complications after hydatid liver surgery: incidence and risk factors. J Gastrointest Surg. 2002 Sep-Oct;6(5):706-12. doi: 10.1016/s1091-255x(02)00046-x.
7. Saritas U, Parlak E, Akoglu M, Sahin B. Effectiveness of endoscopic treatment modalities in complicated hepatic hydatid disease after surgical intervention. Endoscopy. 2001 Oct;33(10):858-63. doi: 10.1055/s-2001-17342.
8. Bilsel Y, Bulut T, Yamaner S, Buyukuncu Y, Bugra D, Akyuz A, Sokucu N. ERCP in the diagnosis and management of complications after surgery for hepatic echinococcosis. Gastrointest Endosc. 2003 Feb;57(2):210-3. doi: 10.1067/mge.2003.64.
9. Giouleme O, Nikolaidis N, Zezos P, Budas K, Katsinelos P, Vasiliadis T, Eugenidis N. Treatment of complications of hepatic hydatid disease by ERCP. Gastrointest Endosc. 2001 Oct;54(4):508-10. doi: 10.1067/mge.2001.118256.

