



# Synchronous Gallstone and Hydatid Cyst: Which Procedure?

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## Abstract

Hydatid cyst disease continues to be a problem in developing countries. They are divided into different types according to the Gharbi classification. Percutaneous or surgical treatment can be applied according to their anatomic location and types. Furthermore, laparoscopy is a technique of minimally invasive surgery. PAIR (Percutaneous aspiration, Irrigation, Reaspiration) should perform to some cysts if there has been an experienced radiologist. If stones in gallbladder and hydatid cysts in the liver are detected and there is no experienced radiologist, laparoscopic cholecystectomy and percutaneous drainage should be performed in the same session. In this method, an external used veress needle was used for aspirating the cyst content, and povidone-iodine was administered as a proto-scholastic agent. No problem was observed at the patient's follow-ups, and the patient was discharged.

**Keywords:** Laparoscopic, gallstone, hydatid cyst, percutaneous

## Introduction

Percutaneous drainage or various surgical procedures are treatment preferences of hydatid cysts. After the evacuation of the cyst content in such methods, albendazole is often used in medical treatment. According to the Gharbi classification, percutaneous drainage for the type 1 and 2 cysts, either drainage or surgery according to concentration for type 3, and surgical treatment for type 4 are recommended (1). Success rate of percutaneous treatment is stated to be higher in type 1 and 2 compared with that in type 3 (2).

## Case Report

In this case, we present our approach in a 52-year-old female patient with type 1 hydatid disease in the right lobe of her liver accompanied by gallstones.

The patient was admitted to a polyclinic with dyspeptic complaints such as combustion occurring after meals and stomachache. WBC count was 5600 K/uL, Hb level was 12.5 gr/dL, AST level was 28 UI/L, and ALT level was 32 UI/L. Ultrasonography confirmed the presence of three gallstones of approximately 1 cm in size and a type 1 hydatid cyst 10 cm in diameter in the right lobe segment 7 of the liver. The patient's complaints were considered to be related to the gallstones. Upper abdominal computerized tomography was performed to evaluate the anatomy of the patient's cyst and its relationship with the surrounding tissue (Figure 1). Not considering gallstones, the case was suitable for percutaneous treatment. For hydatid cyst, albendazole was administered for 2 weeks as a dose of 2 x 400 mg before surgery.

Laparoscopic cholecystectomy was necessary because of the gallstones. We decided to apply both cholecystectomy and percutaneous drainage to our patient in the same session.

After standard laparoscopic cholecystectomy, the cyst was located using a scope. Povidone-iodine-impregnated gauze was placed to protect the surrounding tissues. Veress needle was percutaneously inserted from outside and entered from the normal liver tissue to avoid rupturing the cyst (Figure 2). First, the cyst content was aspirated (approximately 180 cc) (Figure 3). After complete aspiration, 30 cc povidone-iodine was injected via the veress needle into the cyst lumen. A 14-F drainage catheter was placed in the pouch (Figure 4).

The patient was transferred to her hospital room following the operation, and the drainage catheter was removed on the second day after the surgery. Upper abdominal CT was performed, and the cyst of the pouch revealed a decrease from 10 cm to 7 cm in diameter. No problem was ob-

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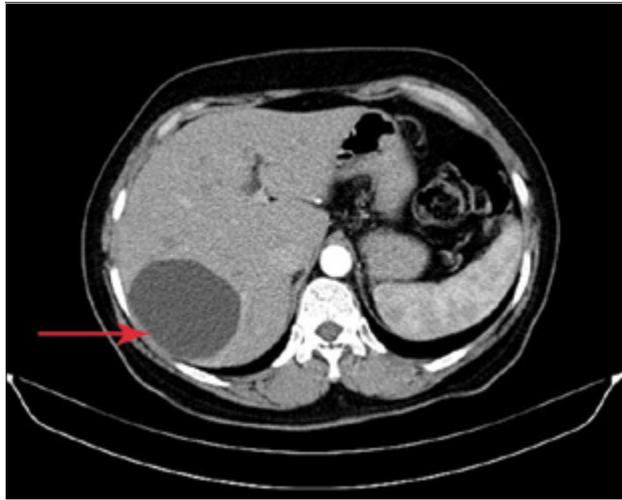


Figure 1. CT image of hydatid cyst in the liver

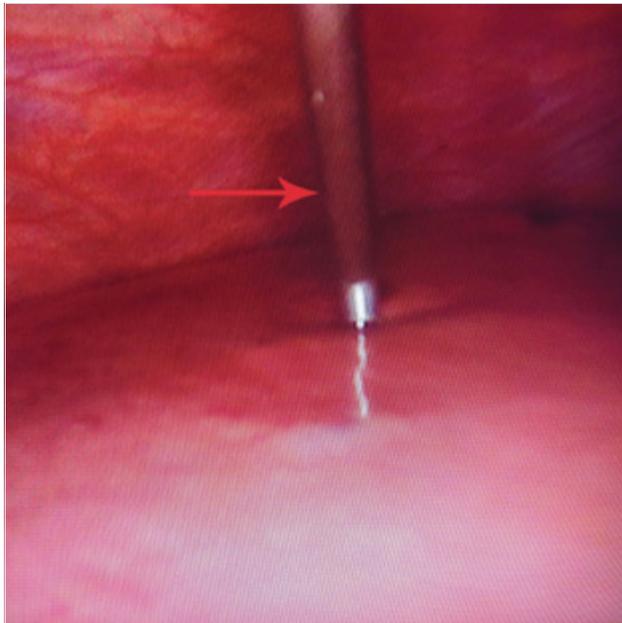


Figure 2. Inserted veress needle



Figure 3. Aspirating the cyst content

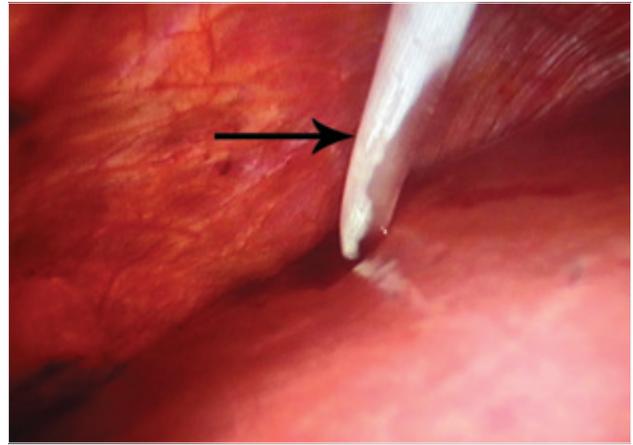


Figure 4. Catheter placed in the pouch

served at the patient's follow-ups. Albendazole treatment (2 x 400 mg dose) was planned, and the patient was discharged. Informed consent was obtained from the patient to write this case report.

## Discussion

In our clinic, laparoscopic surgery for hydatid cyst is being performed in selected cases. The biggest disadvantage of laparoscopic hydatid cyst operation is the risk of the cyst content spreading in the abdomen. Moreover, an anaphylactic shock may occur (3). Minimally invasive surgery is increasingly becoming common. It is known to reduce various wound problem, deep vein thrombosis, pneumonia, sepsis, metabolic problems, and in patient death during the index hospitalization (4). Another point that we believe is important here is performing two surgeries at the same time.

Hydatid cyst disease is successfully treated with percutaneous way. Surgery should be considered secondary except it has been in difficult areas, intensive content or in complicated cysts. In conventional surgery, there is a distinct difficulty to reach cysts particularly those posteriorly located in the right liver lobe. Diaphragm lacerations and ecartation-caused liver injuries may arise. Even laparoscopic methods include these complication risks; however, they can be surmounted using additional trocars and repositioning the patient. In addition, the diaphragm and liver injuries are observed at lower rates in laparoscopy.

## Conclusion

We tried to present an alternative treatment approach in the presence of incidentally detected hydatid cyst disease in a patient with a different pathology. We believe that this method can be performed during technical deficiencies and in the absence of experienced radiologists.

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

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