

## Hepatic Biliary Cysts: When should Surgery be Performed?

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### Abstract

### Original Research Article

Hepatic biliary cysts, also known as simple hepatic cysts, are lesions frequently encountered in clinical practice. They result from cystic dilataion of an aberrant bile duct or a biliary microharmartoma. In the vast majority of cases. They are asymptomatic and incidentally discovered. When present, symptoms are usually related to large cystic size or occurrence of complications. Surgical management is indicated in complicated or hyperalgesic forms. Laparoscopic deroofing is considered the Gold standard.

**Keywords:** Biliary Cyst, Resection Of The Prominent Dome, Cystectomy, Hepatectomy, Hydatid Cyst, Cystadenocarcinoma.

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## INTRODUCTION

Biliary cysts are the most common hepatic lesions.

They are often asymptomatic and discovered incidentally during abdominal imaging.

The average age at diagnosis is 40 years (peak between 50 and 60 years), with a clear female predominance (sex ratio 1:9).

Surgery is indicated in case of complications.

Laparoscopic resection of the prominent dome is the most commonly applied treatment.

### Objective

We report two cases of giant biliary cysts treated by laparoscopic resection of the prominent dome to discuss various diagnostic and therapeutic aspects.

## MATERIALS AND METHODS

### Case 1

A 62-year-old male patient with a history of asthma under treatment and laparoscopic cholecystectomy 10 years ago, was admitted for management of a biliary cyst evolving for 8 years with progressive enlargement.

**Laboratory Tests :** wan normal.

### Abdominal CT Scan

Cystic lesion spanning hepatic segments VI, VII, and VIII (well-circumscribed, no identifiable wall, lobulated contours in some areas, hypointense on T1, hyperintense on T2, without septations or internal vegetations, non-enhancing after contrast injection), measuring 73 × 100 × 100 mm (Transverse × Anteroposterior × Craniocaudal), with no obvious communication or compression of adjacent bile ducts.

### Gallbladder Bed Free

#### Surgical Procedure

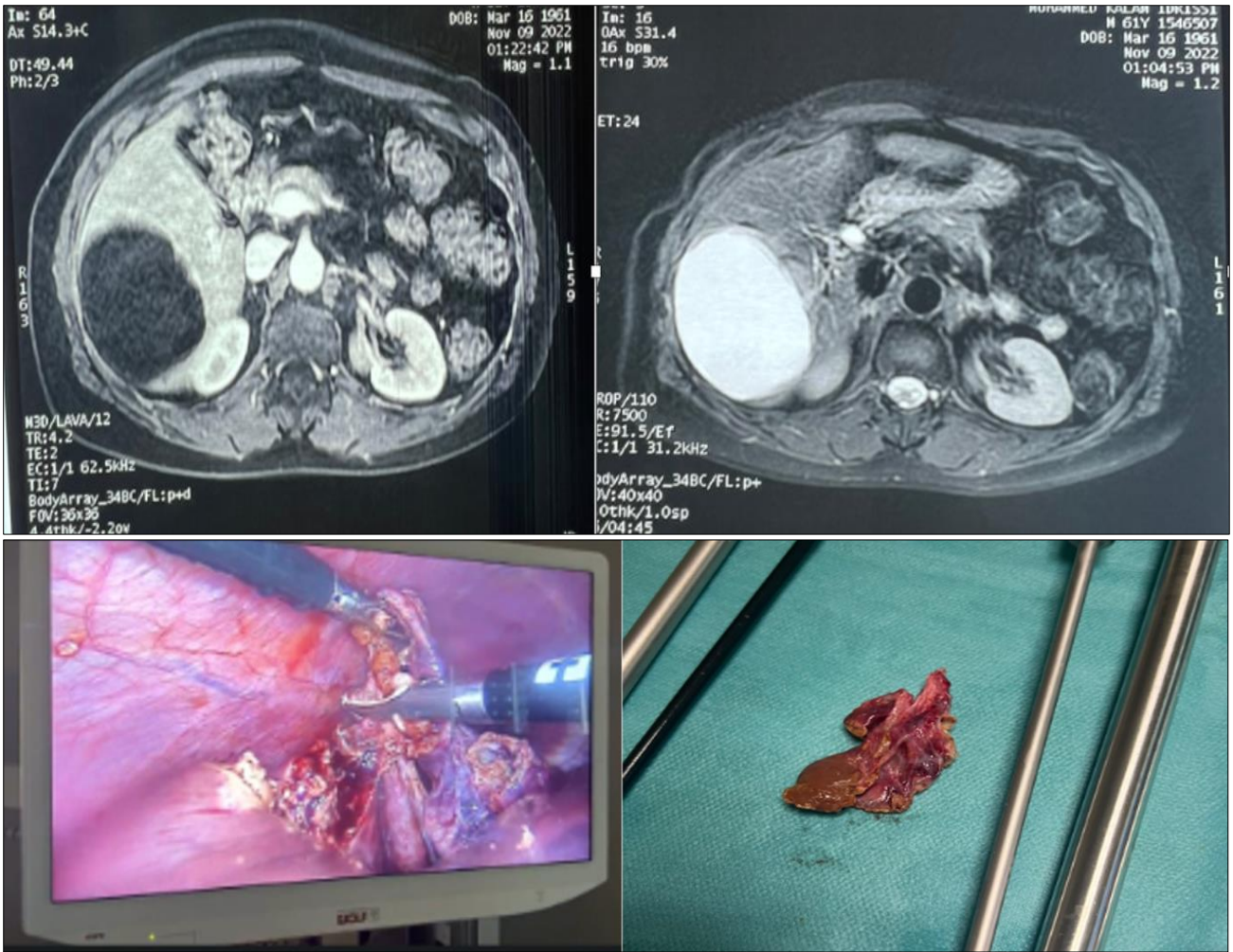
Aspiration of cyst content with laparoscopic resection of the prominent dome and cyst wall.

Copious irrigation with 0.9% saline and placement of a drain in the residual cavity.

**Surgical Exploration:** Large biliary cyst of the hepatic dome.

**Histopathology:** Consistent with a biliary cyst.

**Postoperative Course:** drain removed on day 7, sutures removed on day 15, uneventful recovery.



**Case 2:**

A 58-year-old female patient, previously operated 3 years ago for a suspected stage 1 hydatid cyst of segment IV (histopathology showed features of an excretory biliary cyst with no malignancy), was admitted for recurrence of a biliary cyst revealed by progressive simple hepatic colic for 4 months without associated symptoms.

**Laboratory Tests :** wan normal.

**Hydatid Serology:** Negative.

**Abdominal CT Scan:**

Hepatic cystic lesion in segment IV measuring 13.2 cm, with thin flaccid wall, homogeneous hypodense content, non-enhancing after contrast injection, showing

anterior exophytic development, consistent with a biliary cyst.

Gallbladder thin-walled and non-lithiasic.

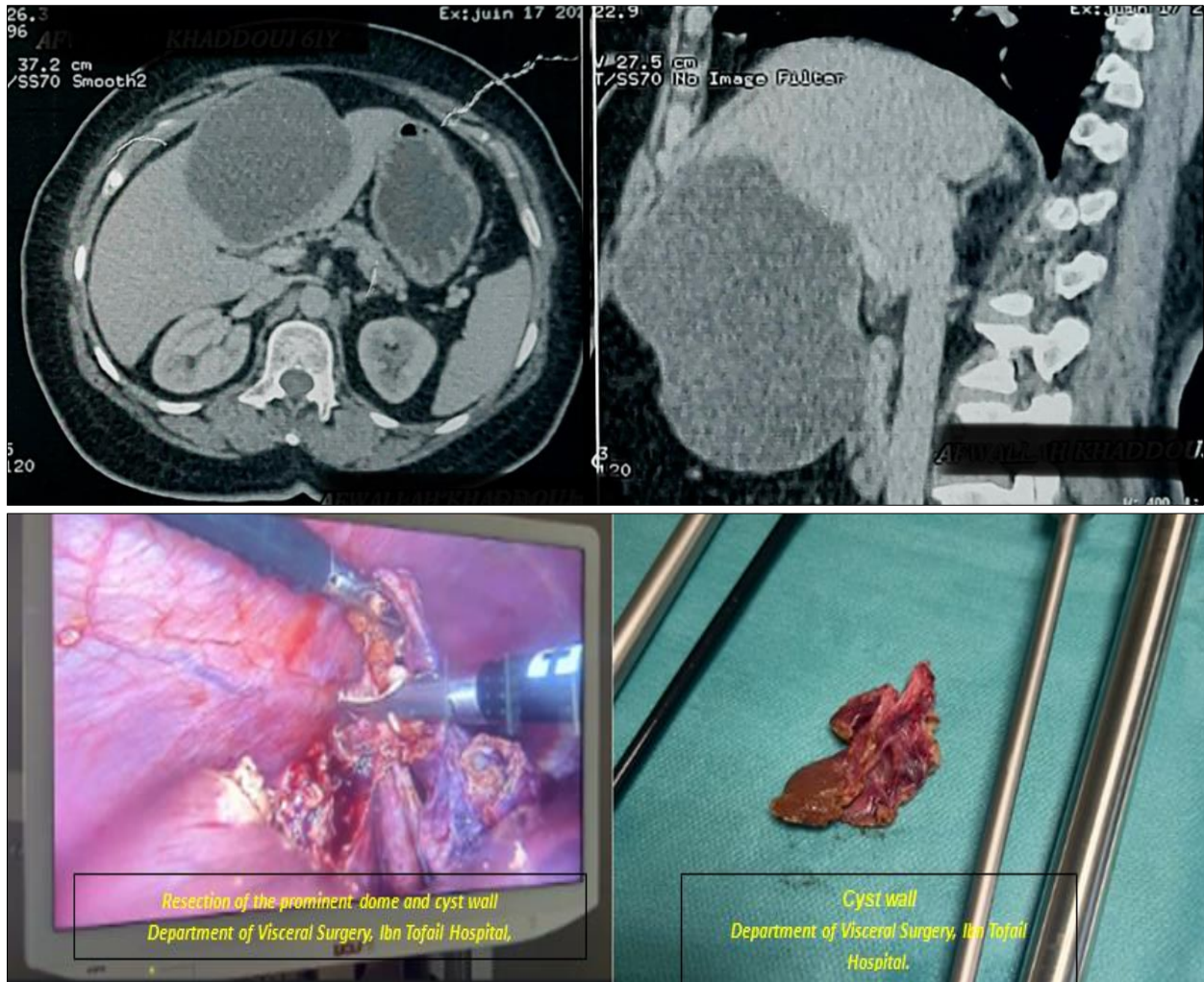
**Surgical Procedure**

Aspiration of cyst content with resection of the prominent dome and cyst wall. Copious irrigation with 0.9% saline and placement of a drain in the residual cavity.

**Surgical Exploration:** Large biliary cyst of hepatic segment IV.

**Histopathology:** Consistent with a biliary cyst.

**Postoperative Course:** drain removed on day 7, sutures removed on day 15, Uneventful recovery.



## DISCUSSION

Biliary cysts are intrahepatic, fluid filled lesions lined by epithelium identical to the biliary ducts, with which they do not communicate.

They are usually benign and asymptomatic but can evolve into complications and become symptomatic, including: painful discomfort, congestive episodes, intracystic hemorrhage, rupture, infection, compression of adjacent intra- or extrahepatic structures, fistulization, and, rarely, malignant degeneration.

- Diagnosis relies on imaging: ultrasound, CT scan, or MRI.
- Biliary cysts may be confused with other cystic lesions, such as cystadenoma or type 1 hydatid cyst.
- Hydatid serology is mandatory in any suspected biliary cyst.

**Management:** Surgery is indicated in case of complications:

1. Conservative management: Observation ± symptomatic treatment.

2. Radiological methods: Percutaneous aspiration or drainage under ultrasound or CT guidance, with or without sclerotherapy.
3. Surgical methods: Laparotomy or laparoscopy; the laparoscopic approach is preferred. Techniques include resection of the prominent dome, cystectomy, or hepatectomy.

Uncertainty between a cystadenocarcinoma and a hydatid cyst should guide toward cystectomy or hepatectomy, as wall rupture in either condition may lead to intraperitoneal dissemination of cystadenocarcinoma or anaphylactic shock in case of a hydatid cyst.

**Therapeutic Indications:** Complicated or highly symptomatic forms.

- Aspiration: Provides symptom relief but rapid recurrence.
- Sclerotherapy: Postoperative pain and risk of delayed cholangitis.
- Cystectomy or hepatectomy: Rare recurrence but associated with high morbidity.
- Resection of the prominent dome: Remains the most tolerated treatment.

## CONCLUSION

- Diagnosis of a biliary cyst requires exclusion of a hydatid cyst and cystadenocarcinoma.
- Ultrasound is the imaging modality of choice.
- Asymptomatic biliary cysts generally require conservative management.
- Surgery is indicated in case of complications.
- Diagnostic uncertainty is an argument in favor of complete cyst excision.

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