

## Abstract

**Aim:** The aim of this study is to present four cases of patients with liver abscess who were cured by hepatectomy after failing CT-guided and surgical drainage.

**Cases Presentation:** Four cases of patients with liver abscess were selected. All of them subsequently underwent liver resection as their clinical condition failed to improve. On follow up, their condition improved and there was no recurrence of the abscess.

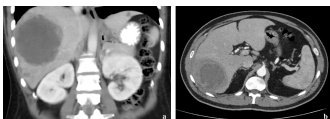
**Conclusion:** These cases highlight the importance of considering liver resection in curing patients with liver abscess who did not improve with medical therapy and CT or surgical drainage.

## Introduction

- Liver abscess is a **rare** condition with a reported annual incidence of **3.6** cases per 100,000 individuals in the United States. The disease could be **lethal** if left untreated.
- Current advances in the management include diagnostic and interventional radiology that have **decreased** the rate of mortality.
- The aim of this study is to present **four** cases of patients with liver abscess who were cured by **hepatectomy** after failing CT-guided and surgical drainage.

## Cases Presentation

- Four cases of patients with liver abscess were selected (**Table 1**).
- The **first** case is a 75-year-old male who developed liver abscess after undergoing chemoembolization for HCC.
- The **second** and **third** cases are a 48-year-old female and a 44-year-old male, who were diagnosed with cryptogenic liver abscess (**Image 1-a** and **1-b** respectively).
- The **fourth** case is a 22-year-old male who developed liver abscess after an injury from a shrapnel.
- All of them were initially treated with empiric antibiotics and underwent **CT-guided** and **surgical** drainage. They subsequently underwent liver **resection** as their clinical condition failed to improve. On follow-up, the patients **improved** and repeat abdominal ultrasonography was **negative** for recurrence of abscesses.



**Image 1:** Abdominal CT-scan in coronal plane showing multiple sized cystic lesions with ring enhancement in both lobes of the liver (a); Axial CT-scan of the abdomen showing a well defined hypoenhancing lesion with minimal rim enhancement involving segments VI and VII (b)

	Case I	Case II	Case III	Case IV
Age	75	48	44	24
Gender	Male	Female	Male	Male
Cause of liver abscess	Post-radiofrequency ablation in HCC-patient	Cryptogenic	Cryptogenic	Foreign body injury from a shrapnel
Chronic Hep	Positive	Negative	Negative	Negative
Preop CRP	249 mg/l	240 mg/l	2 mg/l	250 mg/l
Culture	E. Coli (ESBL) and Enterococcus Faecium	No growth	No growth	Pseudomonas aeruginosa and Candida

**Table 1.** Characteristics and laboratory findings of the four patients with liver abscess selected

## Discussion

- Liver abscess is a condition associated with high **morbidity** and **mortality**. In the past, it was usually treated with open surgical drainage.
- However, advances in diagnostic and interventional radiology over the last three decades have **facilitated** the development of a **minimally invasive approach** to manage this disease. In combination with targeted antimicrobial therapy, percutaneous drainage techniques are now the **mainstay** of treatment.
- Surgical drainage or liver resection can sometimes be considered to treat hepatic abscess in selected cases where the abscess is **not accessible** to CT-guided percutaneous drainage, if it is **ruptured**, or if the patient **failed to improve** with optimized medical therapy and percutaneous drainage.
- These cases highlight the importance of considering **liver resection** in curing patients with liver abscess who did not improve with medical therapy and CT or surgical drainage.

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