Liver abscess: case report

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Abstract

A liver abscess is a pus-filled cavity within the hepatic parenchyma, most commonly resulting from bacterial infection via the portal circulation. Although treatable, it can be life-threatening in elderly individuals and in those with co morbidities. This case describes the presentation, clinical course, and management of a large liver abscess in an elderly patient treated at a tertiary care center in Gujarat. It highlights the importance of early diagnosis, appropriate antimicrobial therapy, and multidisciplinary care in optimizing outcomes. Further research is required to refine management protocols for complicated cases.

Keywords: Liver abscess, pyogenic abscess, ultrasonography, antibiotics, elderly patient, Gujarat, Surendranagar.

Introduction

Liver abscesses, most commonly pyogenic, remain a significant clinical challenge in developing countries[1]. They typically arise secondary to bacterial, amoebic, or occasionally fungal infections and present with fever, abdominal pain, and systemic inflammatory features[2]. Delayed diagnosis may lead to sepsis, vascular involvement, or multi-organ dysfunction[3]. Imaging modalities—particularly ultrasonography and contrast-enhanced CT—play a critical role in diagnosis, monitoring, and guiding drainage[4]. Standard management includes empiric broad-spectrum antibiotics, percutaneous drainage when indicated, and supportive care[5].

Case Report

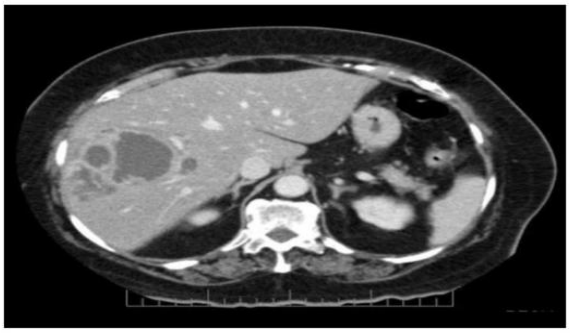
A 74-year-old male, Amthubhai Dhanajibhai Detroja from Bharad (Tal: Dhrangadhra), was admitted to the General Medicine Ward, C.U. Shah Medical College & Hospital, Surendranagar, with a history of high-grade fever for more than 8 days, generalized weakness, vomiting, chest discomfort, and palpitations. There was no significant past medical or surgical history, and no documented co morbidities.

On examination, he was febrile but hemodynamically stable, with normal cardiovascular and respiratory parameters. Mild pallor was present. Initial laboratory evaluation revealed leukocytosis and mild anemia.

Investigation :

Imaging

Abdominal ultrasonography and contrast-enhanced CT demonstrated a well-defined hypo dense lesion in segment VIII of the right hepatic lobe measuring approximately 7–8 cm (estimated volume ~550 mL), consistent with a liver abscess. Extension towards the inferior vena cava raised concern for early thrombus formation, a known complication in large abscesses[6].



Laboratory:

Investigation Table

Date of Ix	2/8/2025	5/8/25	6/8/2025	8/8/25	10/8/25	13/8/25
Hb	13.1	12.7	11.5	9.90	10.10	5.30
TC	20370	15970	15000	23000	20400	11000
DC						
PLT Count						
CRP						
ESR						
RBS						
RI, UREA						
S.Creatinine						
S.Bilirubin						
SGPT						
Na+						
K+						
Cl-						

Stool routine - obt +ve
PT -17.4 —> 22.8
INR 1.26
Aptt -24.8
SGPT-340.30
Alp-354.70
TP -4.38
Alb -1.18
Glb -3.20

CBC showed leukocytosis (TLC 15,000–23,000/mm³) and progressive anemia. Liver function tests revealed mild elevation of bilirubin and transaminases, while renal function tests demonstrated azotemia. CRP and ESR were elevated. Coagulation profile showed prolonged PT/INR. Stool examination was occult blood positive. Serial biochemical values are summarized in Table 1.

Cardiac Evaluation:

Echocardiography showed normal cardiac structure and preserved function, but reduced ventricular compliance without valvular vegetation.

Other:

Chest radiograph was unremarkable except for old hilar calcifications. Mild ascites and a moderate pleural effusion were noted.

Management

The patient received broad-spectrum intravenous antibiotics, including piperacillin–tazobactam and metronidazole, consistent with empirical regimens recommended for pyogenic liver abscess[7]. Rifaximin was added for gut sterilization. Supportive management included intravenous fluids, albumin infusion, vitamin supplementation, Pantaprazole, and antiemetic.

Renal and cardiac parameters were closely monitored. Foley catheterization was performed for accurate urine output measurement. No immediate indication for percutaneous drainage was identified at presentation; however, colonoscopy was planned for evaluation of suspected colitis noted on imaging. Serial imaging demonstrated partial interval reduction in abscess size.

Outcome

By the ninth hospital day, the patient′s fever had subsided and inflammatory markers showed gradual improvement. Imaging showed partial reduction in abscess volume without new complications. On 13/08/2025, the patient opted for discharge against medical advice (DAMA) with instructions to continue antibiotics, maintain nutritional support, and attend regular outpatient follow-up. However, he was subsequently lost to follow-up.

Discussion

Pyogenic liver abscess is a potentially life-threatening condition, particularly in elderly individuals, due to higher risk of septicemia, multi-organ dysfunction, and vascular complications[1,3]. Early diagnosis using ultrasonography and CT is essential in assessing abscess characteristics, identifying complications such as hepatic vein or IVC thrombosis, and guiding the need for percutaneous drainage[4, 6].

Management typically involves a combination of targeted antibiotics and drainage procedures when indicated[5,7,8]. In large abscesses or those with vascular involvement, closer monitoring and multidisciplinary care—including infectious disease, radiology, gastroenterology, and critical care—are crucial[9]. This case demonstrates the effectiveness of timely antibiotic therapy and supportive care, though long-term outcomes could not be assessed due to lack of follow-up.

Conclusion

This case highlights the importance of prompt recognition, comprehensive imaging, and aggressive antibiotic therapy in managing pyogenic liver abscess. Elderly patients require vigilant monitoring due to higher complication risk. Early diagnosis and multidisciplinary care can significantly improve outcomes. Continued follow-up is essential to detect late complications such as IVC thrombosis or post-infective colitis.

Références

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