

A Case Report of Management of Rupture Liver Abscess with Different Modalities

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Abstract

Background: Ruptured liver abscess can result in lethal outcome if there is delay in diagnosis and treatment. It is a surgical emergency presenting with an acute abdomen.

Objective: A study to determine the outcome associated with different treatment strategies of ruptured liver abscess.

Material and Methods: This was a retrospective study in which 50 patients with liver abscess who were reported to general surgery department in scl hospital, ahmedabad included in the study. All patients with ruptured liver abscess included in the study and other causes of peritonitis were excluded. A performed protocol for management was followed for all the patients, and various parameters contributing to the illness and its prognosis were evaluated and assessed.

Results: Out of 50 patients assessed, male patients were mainly affected (86%). The most affected age group was 31-4 years (64%) followed by 41-50 years (22%). Right hypochondrium pain was the most common presenting complaint. Nine patients were presented with signs of toxemia. *Escherichia coli* was the most common organism in our study in 19 patients. A total of 20 patients had mortality.

Conclusion: Ruptured liver abscess most commonly

involved in right lobe of the liver. Males were affected more than the females due to more alcohol consumption. Most common age group falls between 30 to 60 years of age. If prompt treatment were given at time, mortality involved with it is evitable.

Keywords: Liver abscess; USG; Drainage; Rupture; Septicemia.

Introduction

Liver abscess is a common condition in tropical countries and is associated with significant morbidity and mortality. There are two major classifications of hepatic abscess; pyogenic and amoebic. However, with the increase in patients with acquired immunodeficiency syndrome and other types of immunosuppression; the reports of fungal and mycobacterial abscesses is increasing. There are various complications associated with hepatic abscesses, of which, rupture of the abscess is the most common and fatal if not treated timely. Rupture of abscess is a cause of death in tropical countries like India and is an important part of the differential diagnosis of patients with acute abdomen in this region. Improving imaging techniques have aided the clinicians in the diagnosis of hepatic abscesses and have subsequently become important treatment tools, decreasing the number of cases treated with surgical intervention. Furthermore, the demographics of the hepatic abscess have changed. Previously open surgery was the only choice.

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With invent of effective antimicrobials, newer methods of radio diagnosis like USG and CECT and interventional radiological techniques like USG, CT guided aspiration, percutaneous catheter insertion, mortality associated with this condition has significantly decreased. Though open surgery still remains most commonly used management modality, with advent of minimally invasive surgery, laparoscopic drainage of the ruptured abscess have been described with few complications. Thus, multiple management options are available today and ruptured liver abscess is a preventable and manageable pathology. However, what to do is decided by the clinicians based on the patient's medical status. No specific guidelines are available for choosing the modality of treatment. Hence, despite changes in classification, diagnosis and treatment, hepatic abscesses still carry significant morbidity and mortality and continue to challenge the clinicians with diagnostic and therapeutic dilemmas. The purpose of this study is to analyse the various pathological and epidemiological factors in patients with ruptured liver abscess for better management and insight into the prognosis for such patients. Also, an attempt has been made to compare the outcome of the various modalities of management in such cases so as that the modality best suited to the pathological state of the patient may be chosen in future.

Materials and Methods

All patients with ruptured liver abscess were admitted in our SCL hospital are included in the study. Retrospective and Prospective analysis were carried out.

All patients were kept nil per oral with ryles tube care and were subjected to IV antibiotics. Patients were subjected to radiological investigations such as chest X ray and abdominal X ray along with ultrasonography abdomen. Blood investigations were evaluated for complete hemogram, Total Leucocyte Count, Liver Function Test, and Coagulation Profile. Patients with deranged Coagulation Profile were given injection Vitamin K intramuscular for 3 days and fresh frozen plasma. Patients were subjected to exploratory laprotomy with thorough peritoneal lavage, and abdominal drains were kept in right sub hepatic region and left pelvic region and PUS sent for culture and sensitivity. Patients were kept for regular follow-ups.

Results

Table 1: In our study, out of fifty patients, 43 were males and seven were females. Males are affected more due to more alcohol consumption.¹

Sex	Number of patients (%)
Male	43(86)
Female	7(14)
Total	50(100)

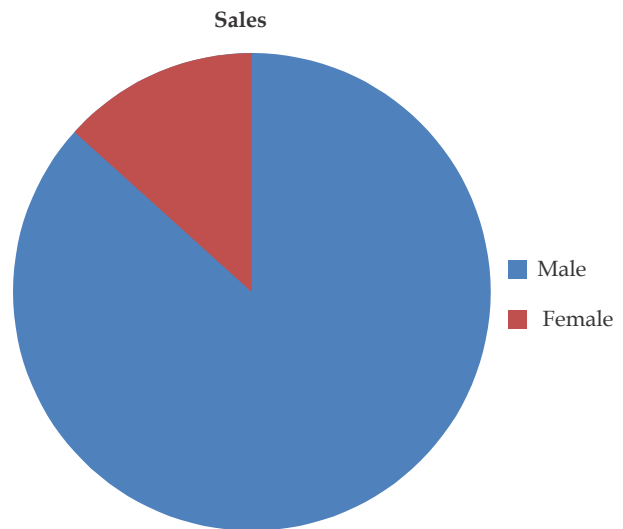


Table 2: Most common age group affected in our study is 31–40 years comprising of 32. Patients (64%), 11 patients between 41 and 50 years (22%), five patients between 51 and 60 years (10%), two patients between 21 and 30 years (4%).²

Age group (year)	Number of patients (%)
10–20	0
21–30	2(4)
31–40	32(64)
41–50	11(22)
51–60	5(10)
>60	0

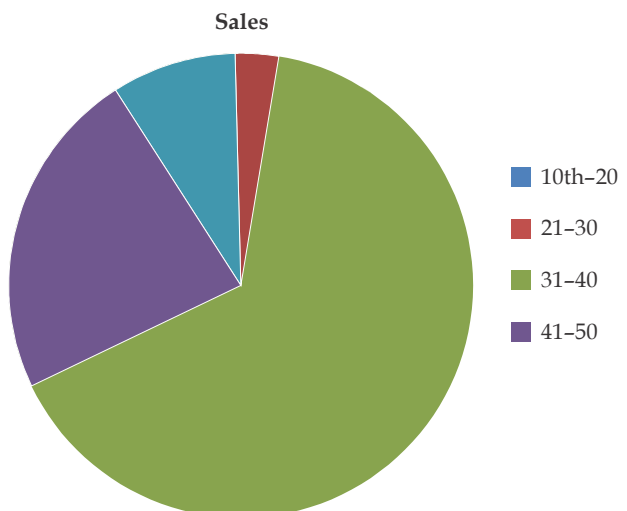


Table 3: Most of the patients presented with complaints of right hypochondrial pain Specifically 43 patients (86%). Thirty- four patients (68%) complained of nausea and vomiting, 17 patients (34%) had presented with complaints of anorexia and loss of appetite, and 37 patients (74%) had presented with high fever along with chills and rigors.³

Signs/Symptoms	Numbers of patients(%)
Right hypochondrial pain	43(86)
Fever+ chills/rigors	37(74)
Vomiting/nausea	34(68)
Loss of appetite	17(34)
Right hypochondrial tenderness	50(100)
Guarding/rigidity	43(86)
Toxaemia	9(18)

All fifty patients had right hypochondriac tenderness and 43 (86%) had generalised guarding/rigidity. Nine (18%) patients had signs of toxemia on presentation.

Fourty-six patients (92%) had increased total leucocyte counts where as 17 Patients (34%) had haemoglobin level <9 g/dl.

Out of fifty patients , 19(38%) had dm, 14(28%) had hypertension and 3(6%) had chronic liver disease.

Table 4: Out of fifty, 19(38%) yielded e.Coli in pus culture sensitivity reports, seven (14%) showed klebsella, and 11(22%) showed polymicrobial growth. In rest of patients reports were not conclusive.⁴

Organism Isolated	Number of patients(%)
E.coli	19(38)
Klebsella	7(14)
Polymicrobial	11(22)
No Growth	13(26)

Out of fifty patients 13(26) had a mortality, in 3(6) patients rupture was seen in pleural cavity which was drained by intercostal drainage. 21 Patients had mild to moderate pleural effusion on right side.

Discussion

Management of ruptured liver abscess includes placement of catheters, laproscopic drainage, and open surgical methods are superior than laproscopic methods for total resolution.

As in our study abdominal pain as the most presenting complaint.

Our study shows male pre dominance in patients affected with ruptured liver abscess with 43 patients.

Our study suggested that most patients are affected in between age group of 31-40 years.

88% Patients had abscess confined to right LOBE.

Conclusion

Ruptured liver abscess is a surgical challenge which needs to be addressed in early stages to reduce the mortality. Most common affected age group falls between 30 and 60 years of age with male predominance being affected. Alcoholics and dm and immunosuppression are at high risk for developing liver abscess. Right hypochondrial pain with fever and chills and rigors forms main presenting features with increase total leucocyte counts. Surgical exploration with thorough peritoneal lavage improves the patients condition, however , disease onset , patients general condition and presence or absence of comorbid conditions plays an important role in final outcome and prognosis of the patient.

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