

Clinicopathological Study of Liver Abscess

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Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Background: Liver comprises 48% of all the visceral abscesses. Liver abscess is the condition which involves collection of purulent material in liver parenchyma due to bacterial, parasitic, fungal, or mixed infections. It is common in India with 2nd highest incidence due to poor sanitation, overcrowding and inadequate nutrition.

Methods: This study was a cross sectional study of patients attending surgery department in J L N Medical College, Ajmer Rajasthan. The study was conducted over a period of 1 year on 100 patients of liver abscess.

Results: Most common symptoms were pain abdomen (100.00%) in both type of liver abscess. 66.67% patients were present with loss of weight in pyogenic liver abscess and 46.88% patients were present with anorexia in amoebic liver abscess. Most common sign in pyogenic liver abscess was tenderness (88.89%) and most common sign in amoebic liver abscess was hepatomegaly (68.75%).

Conclusion: Amoebic liver abscess is a medically treated common infection prevailing in unhygienic condition, affecting people mostly between 31-40 years of age whereas pyogenic liver abscess patient commonly falls between 31-40 years age group. Both liver abscesses show a male preponderance.

Keywords: Amoebic liver abscess, Pyogenic liver abscess, Infection.

Introduction

Liver comprises 48% of all the visceral abscesses.¹ Liver abscess is the condition which involves collection of purulent material in liver parenchyma due to bacterial, parasitic, fungal, or mixed infections. It is common in India with 2nd highest incidence due to poor sanitation, overcrowding and inadequate nutrition.²

Worldwide, approximately 40-50 million people are infected annually with amoebic abscesses. Prevalence of infection is higher than 5%-10% in endemic areas.³ Various studies from rural areas of Central and South America, India, and the tropical areas of Asia and Africa have reported prevalence rate as high as 55%.^{4,5} Pyogenic liver abscess has an estimated global incidence of 1.

1-2.3 per 100,000 person-years and in United States, the incidence is approximately 3.6 per 100,000 and has been rising.⁶ Broadly divided into amoebic liver abscess (ALA) and pyogenic liver abscess (PLA) with majority of amoebic etiology in developing countries and pyogenic in developed countries.⁷ Amoebic and pyogenic abscess share many clinical, laboratory and imaging feature, but they exhibit significant difference in epidemiology and treatment. Hence the liver abscess patients, so that an

early diagnosis can be made and prompt treatment can be started and complications can be prevented. differentiation is essential for effective treatment.⁸

Material & Methods

This study was a cross sectional study of patients attending surgery department in J L N Medical College, Ajmer Rajasthan.

Inclusion criteria

- All consenting individuals with the age above 18 years.
- Patients presenting with consistent symptoms of liver abscess.
- Patients diagnosed with liver abscess radiologically (Ultrasonography and CT Scan, if required).

Exclusion criteria: Patients not giving consent for the study.

The study was conducted over a period of 1 year on 100 patients of liver abscess. A detailed history was taken; a thorough physical examination was done. All patients were subjected to complete hemogram, liver function test, kidney function test, coagulation profile (PT/INR) and USG abdomen. Reference ranges of these investigations were defined by the reference ranges of hospital laboratory. Blood and urine cultures were sent. Serologies for Entamoeba histolytica, HIV, hepatitis B and hepatitis C viruses were also done. Pus cultures were done whenever the pus was aspirated. Pus was aspirated only when the abscess was liquefied, by then the patients were started on empirical treatment with antibiotics.

Results

Table no 1. Distribution of different type of liver abscess

Type of liver abscess	No of patients	Percentage
Amebic liver abscess	64	64.00
Pyogenic liver abscess	36	36.00
Total	100	100.00

Out of 100 patients 64.00% were amebic liver abscess and 36.00% were pyogenic liver abscess.

Table no 2. Distribution of different type of liver abscess according to age

Age group (Yrs)	0-10	11-20	21-30	31-40	41-50	>50
Amebic liver abscess	0	4	10	22	12	16
Pyogenic liver abscess	0	0	4	14	12	6
Total	0	4	14	36	24	22

21-30 Yrs age groups were most commonly effect in both type of liver abscess.

Table no 3. Distribution of different type of liver abscess according to sex

Sex	Male	Female
Amebic liver abscess	48	16
Pyogenic liver abscess	28	8
Total	76	24

Male and female ratio was 3.16:1.

Table no 4. Symptoms in liver abscess

Symptoms	Pyogenic liver abscess		Amebic liver abscess	
	No	Percentage	No	Percentage
Pain abdomen	36	100.00	64	100.00
Fever	14	38.89	22	34.38
Chills	10	27.78	12	18.75
Vomiting	4	11.11	10	15.63
Malaise	14	38.89	16	25.00
Anorexia	18	50.00	30	46.88
Cough	14	38.89	24	37.50
Loss of weight	24	66.67	26	40.63
Diarrohea	8	22.22	6	9.38

Most common symptoms was pain abdomen(100.00%) in both type of liver abscess. 66.67% patients were present with loss of weight in pyogenic liver abscess and 46.88% patients were present with anorexia in amebic liver abscess.

Table no 5. Sign in liver abscess

Sign	Pyogenic liver abscess		Amebic liver abscess	
	No	Percentage	No	Percentage
Tenderness	32	88.89	42	65.63
Rigidity	2	5.56	6	9.38
Jaundice	10	27.78	10	15.63
Hepatomegaly	8	22.22	44	68.75

Ascitis	4	11.11	2	3.13
Pleural effusion	6	16.67	10	15.63
Mass	2	5.56	2	3.13

Most common sign in pyogenic liver abscess was tenderness (88.89%) and most common sign in amoebic liver abscess was hepatomegaly (68.75%).

Discussion

Liver abscess is a common entity to encounter in the surgical and medical OPD and emergency, because of its wide area of presentation it poses a challenge to the treating doctor. Liver abscess are classified mainly of bacterial origin or amoebic origin. Amoebic liver abscess is mainly a disease of developing countries like India.

In the present study, also 74% of our patients were of amoebic liver abscess and rest were pyogenic. These findings are consistent with the previous reports on amoebic liver abscess by Sharma et al and Mukopadhyay et al and various other studies.⁹⁻¹²

21-30 Yrs age groups were most commonly effect in both type of liver abscess. Male and female ratio was 3.16:1 in our study which is consistent with previous reports.¹³⁻¹⁴

Majority of the patients presents with the abdominal pain, fever and tenderness. In the present study, 100% of the patients with amoebic liver abscess and pyogenic liver abscess have abdominal pain, 88.89% of the patients with amoebic liver abscess and 65.33% of patients with the pyogenic liver abscess have abdominal tenderness while fever is present in 38.89% and 34.38% of patients respectively. Similar findings are reported by various other studies.¹⁵⁻¹⁶

Conclusion

Amoebic liver abscess is a medically treated common infection prevailing in unhygienic condition, affecting people mostly between 31-40 years of age whereas pyogenic liver abscess patient commonly falls between

31-40 years age group. Both liver abscesses show a male preponderance.

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