



## AMOEBIIC LIVER ABSCESS-A STUDY OF COMPLICATION AND MANAGEMENT IN MEDICAL COLLEGE OF NORTH BIHAR

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### ABSTRACT

**Introduction:** Amoebic liver abscess (ALA) is the most common form of extraintestinal amoebiasis. It has a wide spectrum of clinical presentation. Left untreated it leads to complication increasing morbidity and mortality.

**Aim:** To study a different type of clinical presentation and complication in order to prevent complication by earlier diagnosis.

**Material & methods:** A total of 50 patients with a diagnosis of ALA were studied in Department of surgery of SKMCH Muzaffarpur, Bihar, India from February 2015 to May 2017.

**Result:** Out of 50 pt, 44(88%) were male and 6(12%) female. The age ranged from 20 to 70 year mostly between 30-40 year. Pain in the right hypochondrium was most common symptom present in 42 pt. Fever was present in 40 pt(80%). Solitary abscess was present in 46 cases. USG was helpful in diagnosing ALA. The most common complication was pulmonary in 18(36%) followed by an intraperitoneal rupture in 16 (32%).

**Conclusion:** ALA is the most common infective space occupying lesion of the liver. So any pt with lower chest and upper abdominal pain with tender liver enlargement should raise suspicion of ALA. USG is very helpful in the diagnosis of ALA.

**KEYWORDS :** Amoebic liver abscess(ALA), Extraintestinal Amoebiasis, Pulmonary complication

### Introduction

An amoebic liver abscess is a tropical disease with variable clinical presentation causing difficulty in diagnosis. It is caused by *Entamoeba histolytica*, protozoa. It is prevalent among alcoholics, malnourished and low socioeconomic group. Around the world, almost 40 million people are infected every year [1][2] although these estimates also include morphologically similar *Entamoeba dispar* [3] which gets transferred via the fecal-oral route and is the cause of asymptomatic carriage than *E histolytica*. These disease results in the mortality of 40,000 to 100,000 persons from extraintestinal and amoebic colitis infections [4][5]. About 10% of world population have *Entamoeba histolytica* in their colon. 10% of them may develop invasive amoebiasis and 1-10% of this patient develop the amoebic liver abscess.[6][7][8].

The most common clinical symptoms showed by patients are the pain in right upper quadrant (RUQ) pain and fever. Around one-third of subjects have diarrhea, however few of them with a report of dysentery in the past months [9][10]. Almost 10% present with bacterial superinfection, obstructive jaundice and, inferior vena cava obstruction. Sometimes extraintestinal abscesses may also arise because of hematogenous infections to organs such as lungs, spleen, brain, vagina, and uterus [11][12].

The amoebic liver abscess can be diagnosed by characterizing the condition based on serologic and imaging techniques. The imaging techniques reveal a cystic intrahepatic cavity which is inseparable from other reasons of liver abscesses. Most of the amoebic liver abscesses are solitary lesions, with occasional multiple lesions. [13][14][15]. Its variable clinical presentation is due to complication which results from rupture of abscess in adjoining pleural, pericardial and peritoneal cavity. It also causes symptom by compression effect or embolism [16][17][18]. This study is meant to make an early diagnosis of ALA and prevent complication.

### Material and methods

A total of 50 pt with confirmed diagnosis of ALA were studied in SKMCH Muzaffarpur from Feb 2015 to May 2017. The diagnosis was confirmed by typical anchovy sauce pus on aspiration or surgical decompression, response to anti amoebic drug and by serology. The patients were thoroughly examined and investigated and detailed case sheet were prepared age, sex, socioeconomic condition, proctoscopic finding. Lab investigation included complete blood and urine examination, stool examination for ova and cyst, liver function test, chest X-ray, USG and aspiration study.

### Results and Discussion

50 patients included in the study were from the low socioeconomic group in age ranging from 20 to 70 year. Most of the pt were male 44(88%) and 6(12%) were female. Male to female ratio was 7.3:1. 34(68%) patients had a history of consumption locally fermented alcohol. Fever was present in 42(84%) cases. The pain was present in all patients. It was present in rt hypochondrium in 42(84%) cases. In 46(92%) case there was only one abscess cavity while in 4 pt there was two abscess cavity. Rt lobe was involved in 41(82%) cases. In 7 (18%) cases left lobes were involved. In 2 pt both lobes were equally involved. The size of abscess in the whole series ranged from 4-15cm. The size of the cavity was >10cm in 18(36%) cases, between 10cm and 6cm in 24(48%) cases and <6cm in 8(16%) cases. 14(28%) cases were misdiagnosed clinically. In such cases, laparotomy was diagnostic, 6 cases of intraperitoneal rupture were misdiagnosed as peptic ulcer perforation and one as enteric perforation. 3 cases were misdiagnosed as pneumonia, 3 as acute cholecystitis and 1 as acute pancreatitis. In these cases USG was diagnostic. Pain abdomen was present in all patient. It was present in right hypochondrium in 42(84%) cases, 6(12%), 1(2%) in left hypochondrium and 2(4%) in lower chest. In lab investigation, there was leucocytosis in 40(80%) cases. ESR was elevated in 35(70%) patients. Anaemia was present in 26(52%) cases. Alanine transaminase (ALT) & aspartate transaminase (AST) were elevated in 18(36%) pt. The serum alkaline phosphatase level was elevated in 36(72%) cases.

Among complication right, pleural effusion and atelectasis were the most common complication present in 18(36%) cases followed by intraperitoneal rupture in 16(32%) cases. Other complications were jaundice in 5, ascites in 4, subphrenic abscess in 2, intrapleural rupture in 2, subhepatic effusion in 1. There were 2(4%) death in our study due to combination of these complications.

USG was performed in 40 pt which clinched the diagnosis. The remaining ten patient had emergency laparotomy. Eight pt had abscess cavity <6cm. Among these 6 pt responded to metronidazole. (800mg thrice daily for 10 days) only. Remaining two pt required aspiration. Out of 32 pt with abscess cavity >6cm, 15 pt underwent USG guided aspiration. Remaining 17 pt underwent open drainage. This included 14 cases of intraperitoneal rupture and 3 cases of failed aspiration. Two cases of intrapleural rupture required intercostals tube drainage.

Age group (yr)	Male	Female	Total	Percentage
21-30	3	1	4	8%
31-40	24	2	26	52%

41-50	10	2	12	24%
51-60	4	1	5	10%
61-70	2	0	2	4%
71-80	1	0	1	2%
Total	44	6	50	100%

Table 1:-Frequency distribution of abscess according to age and sex

Serial No.	Finding	No. of patient	Percentage
1	Leucocytosis	40	80%
2	Elevated ESR	35	70%
3	Hb<10gm%	26	52%
4	S.bilirubin>1mg/dl	5	10%
5	Elevated AST&ALT	18	36%
6	Elevated alkalinephosphatase	36	72%

Table 2:-Laboratory finding in patient with ALA

Amoebic liver abscess is prevalent in our country. It has wide spectrum of clinical presentation. As described by Berne it may mimic acute cholecystitis, perforated duodenal ulcer, acute pancreatitis, pneumonia, pleurisy. Mostly adult in third and fourth decades are affected. Pain was most common presenting symptom. In our study, right lobe was most frequently involved which is consistent with finding of other. Alcohol has been implicated in aetiology of ALA. Many patients give past history of consuming alcohol. In our study, pleuropulmonary complication comprising of right pleural effusion and atelectasis was the most common complication accounting for 36% which is in confirmation with reported incidence of 25-42%. Next common complication was intraperitoneal rupture present in 32% of cases. This high incidence of complication was due to late presentation as the patients are illiterate from remote area.

Type of complication	Frequency	Percentage
Pleuropulmonary	18	36%
Intraperitoneal rupture	16	32%
Intrapleural rupture	02	04%
Subphrenic abscess	02	04%
Jaundice	05	10%
Ascites	04	08%
Subhepatic effusion	01	02%

Table 3 – Frequency of complication of ALA

USG is the first line investigation to diagnose liver abscess. It is also helpful in intervention and follow up of cases. It is cheap and sensitivity is very high.

**Conclusion:**

Amoebic liver abscess is a tropical disease with variable clinical presentation making early diagnosis difficult. Left untreated or diagnosed late it gives rise to various complications increasing morbidity and mortality. Any patient having upper abdominal pain with tender hepatomegaly should raise suspicion of amoebic liver abscess and urgent USG should be done.

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