

Clinical Study of Amoebic Liver Abscess with Reference to Conservative Management and Ultrasound Guided Percutaneous Aspiration

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Abstract

Amoebic liver abscess is an important cause of inflammatory space occupying lesion of liver. This study is conducted to know the clinical presentation, management and efficacy of conservative management and percutaneous aspiration in amoebic liver abscess.

Materials and Methods: A total of 30 patients of amoebic liver abscess were selected for the study in Vydehi Institute of Medical Sciences and research centre, Bangalore. Their clinical presentation, lab findings and treatment in the form of conservative (abscess <5 cms) and ultrasound guided percutaneous aspiration (abscess >5 cms) were studied.

Results: The amoebic liver abscess was common in low socioeconomic middle aged male patients. Pain and fever were the most common symptoms. USG abdomen was useful in early diagnosis and assessing prognosis. Most of the abscess was solitary common in right lobe of liver. Liver function tests helps in knowing effectiveness of the treatment and the prognosis. None of the patients were positive for cysts in the stool. 27 (90%) patients were positive for anti amoebic antibody. Conservative management was effective with cavities <5 cms. Percutaneous aspiration was effective with cavities >5 cms. There was one mortality.

Conclusion: Amoebic liver abscess commonly seen in young to middle aged males. Ultrasonography helps in early diagnosis. Abscess <5 cms are effectively treated by conservative management and abscess >5 cms by percutaneous aspiration. Resolution of abscess faster in patients treated by percutaneous aspiration as compared to conservative treatment.

Introduction

Amoebic liver abscess is an important cause of inflammatory space occupying lesion of liver in the tropics¹, like India. India being a tropical country and large number of unclean food and alcohol consumption add up to the risk. Decreased immunity secondary to intake of cytotoxic drugs, diabetes mellitus, and HIV infection etc. further increases susceptibility to liver abscess.²

Management of this disease includes anti amoebic drugs, percutaneous aspiration in cases like (secondary infection, fever and pain persisting for more than 3 to 5 days, if rupture is suspected) and occasionally catheter drainage in case of failure of repeated aspiration. In India, however most of the patients present with large abscess cavities and toxic features needing frequent aspiration of the abscess. The review of literature reveals that the smaller Amoebic liver abscesses (multiple or single) can be treated conservatively.³ Larger Amoebic liver abscesses or amoebic liver abscess with complications (rupture, jaundice, etc.) require intervention in the form of either percutaneous aspiration, closed or

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open drainage. Further there are no studies which show complications and need of reaspiration in patients who have been treated with radiologically guided percutaneous aspiration as an initial line of management. Hence this study is conducted to know the immediate and late effect of, metronidazole alone and a regimen comprising needle aspiration and metronidazole.

Aims and Objectives

- a. To study the clinical presentations, investigations, diagnosis and management of amoebic liver abscess.
- b. To study the efficacy of conservative management in amoebic liver abscess.
- c. To study the efficacy of ultrasound guided percutaneous aspiration in amoebic liver abscess.

Materials and Methods

Source of Data

All patients diagnosed with liver abscess in Vydehi institute of medical sciences and research Centre, Bangalore, over a period of one and a half years i.e., November 2012 to May 2014.

Method of Collection of Data

Sample Size: up to of 30 cases amoebic liver abscess.

Study Design: prospective study of 30 patients.

Duration of Study: November 2012 to May 2014.

Place of Study: Vydehi institute of medical sciences and research Centre, Bangalore.

Inclusion Criteria

- a. Age more than 18 years.
- b. Patients of both sexes, with Amoebic liver abscess admitted to the surgical and medical wards.

Exclusion Criteria

- Paediatric age group <18 years.
- Liver abscess due to malignant cause.
- Liver abscess due to Hydatid cyst of liver.
- Pyogenic liver abscess.

Methodology

- i. After obtaining clearance and approval from the institutional ethical committee, patients fulfilling the inclusion/exclusion criteria were included in the study, after obtaining informed consent.
- ii. Detailed history of all patients is taken with thorough clinical examination; required Investigations were done and entered into a proforma during their stay and follow up.
- iii. Patients with the following signs and symptoms and investigations:
 - a. Tender Hepatomegaly
 - b. Fever
 - c. Intercostal tenderness
 - d. Radiological investigations (USG/CT) suggestive of liver abscess
 - e. Demonstration of characteristic pus by percutaneous needle aspiration or serological tests (ELISA), suggestive of amoebic liver abscess were taken as patient with amoebic liver abscess.
- iv. After establishing diagnosis, Tab. Metronidazole 800 mg TID or Inj. Metronidazole 500 mg IV TID treatment was initiated from day of admission, in case of secondary infection; antibiotics (Fluroquinolones or 3rd Generation cephalosporin's) were added in the treatment.
- v. Therapeutic aspiration reserved for the following cases where:
 - Size of abscess is more than 5 cm.
 - When pain and fever persist for more than 3 to 5 days after starting Antiamoebic therapy.
 - Amoebic serology is in-conclusive.
 - Antiamoebic drugs were contraindicated (pregnancy).
 - Secondary infection.
 - If impending rupture was suspected.
- vi. Four clinical variables-abdominal pain, fever, anorexia, and hepatomegaly-were assessed on first, fourth, and 10th day. Hematological (ESR, and total and differential counts) and biochemical studies (serum aspartate and alanine aminotransferase activities, and alkaline phosphatase activity) were carried out in all patients on first, fourth, and 10th day.

A raised ESR rate of more than 30 mm in 1st hour, total leukocyte count of 12.0×10^9 /l, serum alkaline phosphatase activity of more than 13 King Armstrong units and aspartate aminotransferase activity more than 40 U/l were considered abnormal and successful outcome was marked by a normalization of these variables.

- vii. Follow up: the patients were asked to visit for reassessment every 30 days for 3 months.
- viii. Each treatment modality studied separately for the proportion of patients with successful outcome under each category were calculated, Chi square test was applied.

Statistical Analysis: Descriptive statistical study.

Investigations Done

Routine Investigations: Complete hemogram, Bleeding time, Clotting time, Urine routine, Fasting blood sugar, Postprandial blood sugar, Blood urea, Serum creatinine, Erythrocyte sedimentation rate, ECG, Chest X-ray, USG abdomen and HIV & HBsAg, Liver function test, pus culture and sensitivity, Coagulation profile (Prothrombin time, Activated Partial Thromboplastin Time, International Normalized Ratio), BUN.

Special Investigations: Stool examination, Hepatic imaging (Computerized Tomography), indirect haemagglutination test, sigmoidoscopy, and colonoscopy.

Results

A total of 30 patients of amoebic liver abscess were included and studied during the time period of November 2012 to May 2014 in Vydehi institute of medical sciences and research Centre, Bangalore. Following data were collected and analyzed.

Table 1: Age wise distribution of cases

Age	Frequency	Percent
30 and below	11	36.7
31-50	16	53.3
Above 50	3	10.0
Total	30	100.0

As per the table 1 and Figure 1, liver abscess was more common in the age group of 31-50 years. Mean age was 36.7 years.

Sex distribution

Table 2: Sex distribution

Sex	No of Cases	Percentage
Male	26	87
Female	4	13

Liver abscess were commonly found in Men (87%) than women (13%). Male to female ratio 15:1 (Table 2 and Figure 2).

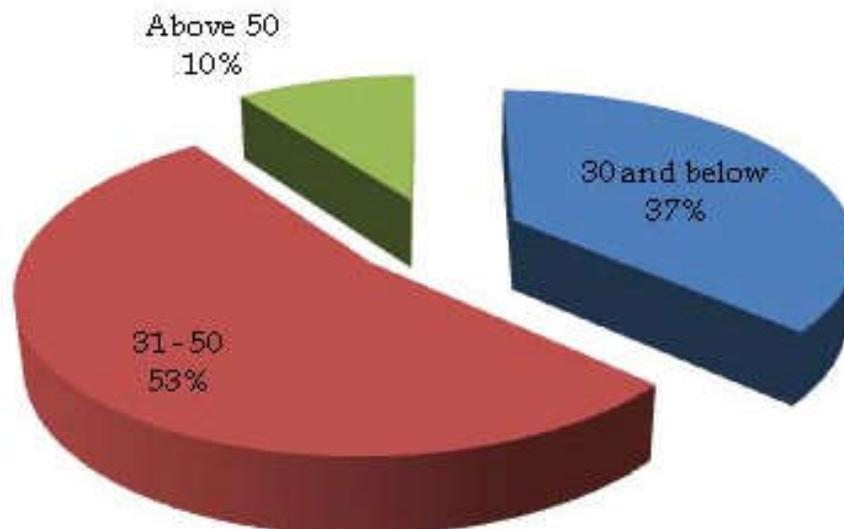


Fig. 1: Age wise distribution of cases

Table 3: Symptoms Wise Distribution of Cases

Symptom	No of Cases	Percentage
Pain	30	100
Fever	25	83
Vomiting	15	50
Diarrhoea	11	37
Joundice	5	17
Cough	3	10
Others	1	30

Pain was the commonest symptom seen in all patients, followed by fever in 83% patients, vomiting in 50% cases, diarrhoea in 37% of patients, jaundice in 17% and cough in 10% patients (Table 3 and Fig. 3).

Table 4: Distribution According to Duration of Symptoms

Duration	No of cases	Percentage
0-4	7	23
5-9	18	60
>10	5	17
Total	30	100

The duration of symptoms varied from 4 days to 20 days. 18 patients (60%) presented during the time period of 5 to 9 days of onset of symptoms. The mean duration of symptoms is 7.5 days (Table 4 and Fig. 4).

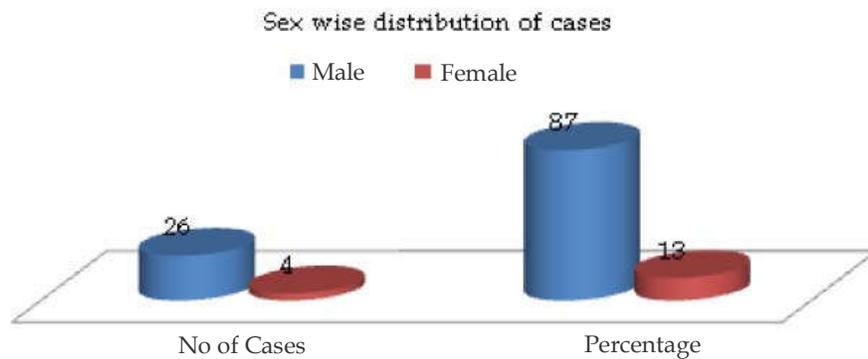


Fig.2: Sex Distribution

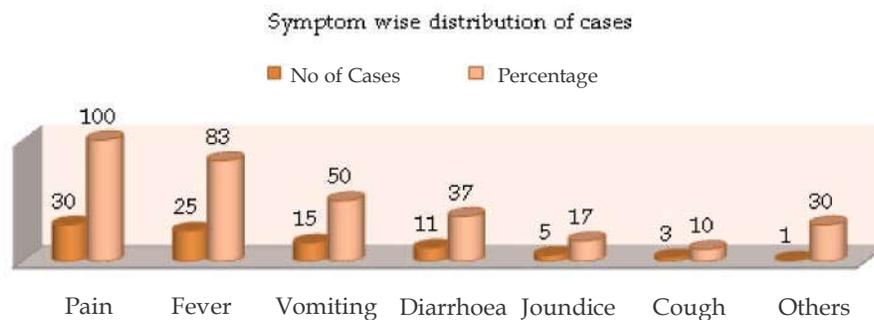


Fig. 3: Symptoms wise Distribution of Cases

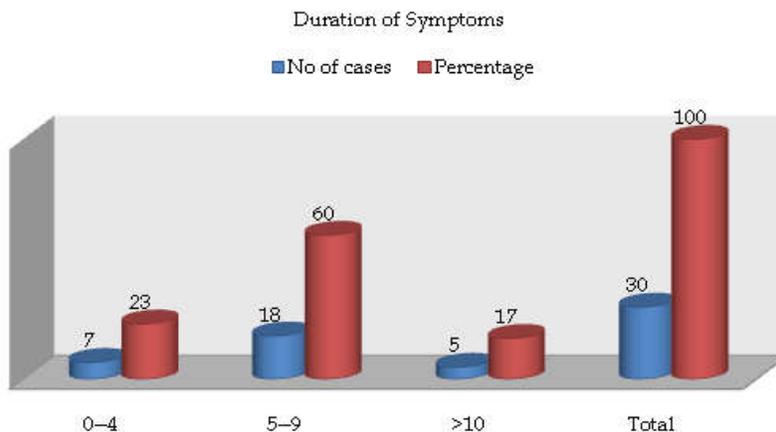


Fig. 4: Distribution According to Duration of Symptoms

Table 5: Clinical Signs

Clinical signs	No of cases	Percentage
Abdominal tenderness	30	100
Hepatomegaly	11	36
Intercostal tenderness	8	26
Pleural effusion	1	3

Table 6: Lobe Involvement

Lobes	No of Cases	Percentage
Right	21	70
Left	5	17
B/L	4	13
Total	30	100

Abdominal tenderness was the most common clinical sign seen in 30 (100%) of patients followed by hepatomegaly in 11 (36%), Intercostal tenderness in 8 (26%) and pleural effusion in one (3%) patient who had secondary infection (Table 5 and Fig. 5).

Most of the 21 (70%) of patients had right lobe liver abscesses, 5 (17%) Patients had abscesses in left lobe of liver and both lobes of liver in 4 (13%) of patients (Table 6 and Fig. 6).

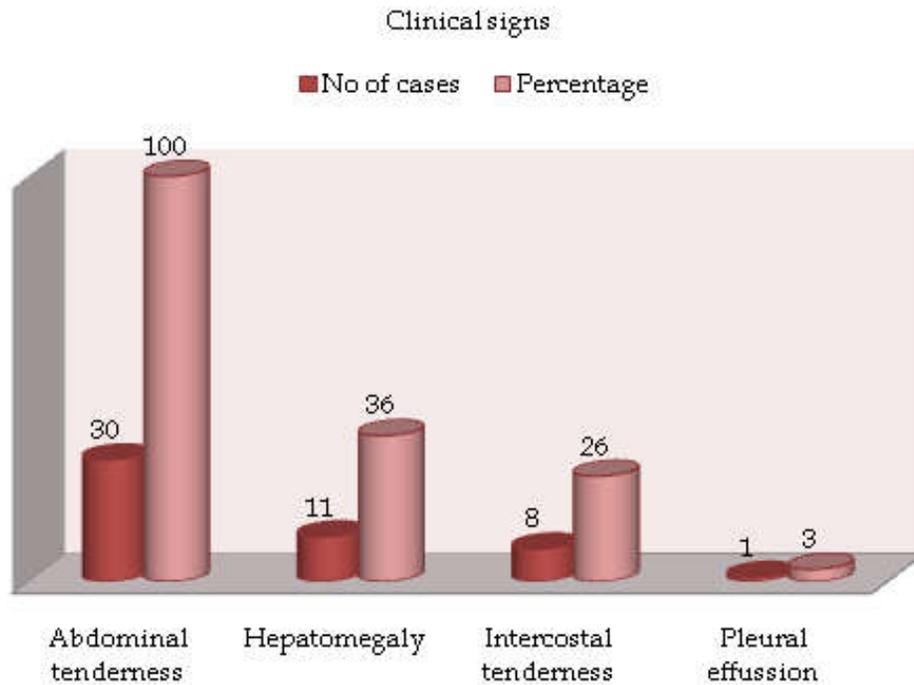


Fig. 5: Clinical Signs

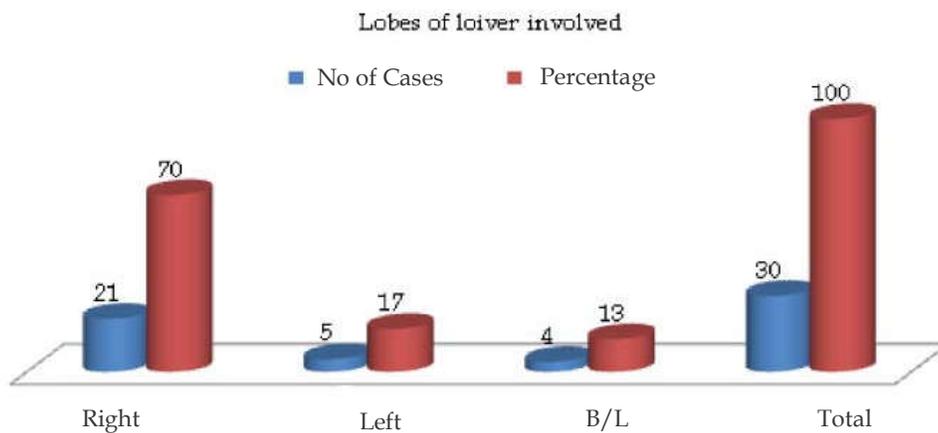


Fig. 6: Lobe Involvement

Table 7: Number of Abscess

No of Abscess	No of Cases	Percentage
1	22	73
2	6	20
3	2	7
Total	30	100

22 (73%) of patients had one abscess, 6 (20%) had two abscesses and 2 (7%) of patients had 3 abscesses (Table 7 and Fig. 7).

Table 8: Distribution of Size of ALA on the day of Admission

	No of Cases	
	C	A
<5	12	0
6-10	0	5
11-25	0	12
>25	0	1

All patients with amoebic abscess cavity size less than 5 cms were treated conservatively. In Patients treated by percutaneous aspiration, 12 were having cavities ranging 11-25 cms and 5 with cavities ranging 6-10 cms (Table 8 and Fig. 8).

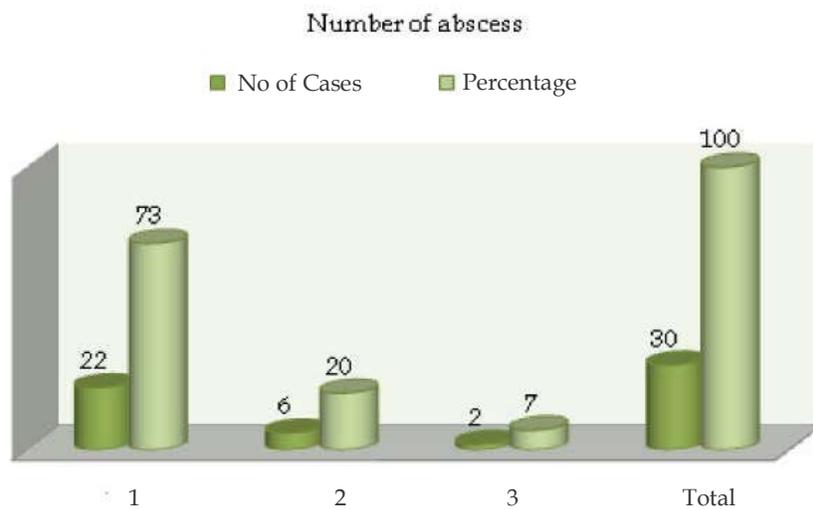


Fig. 7: Number of Abscess

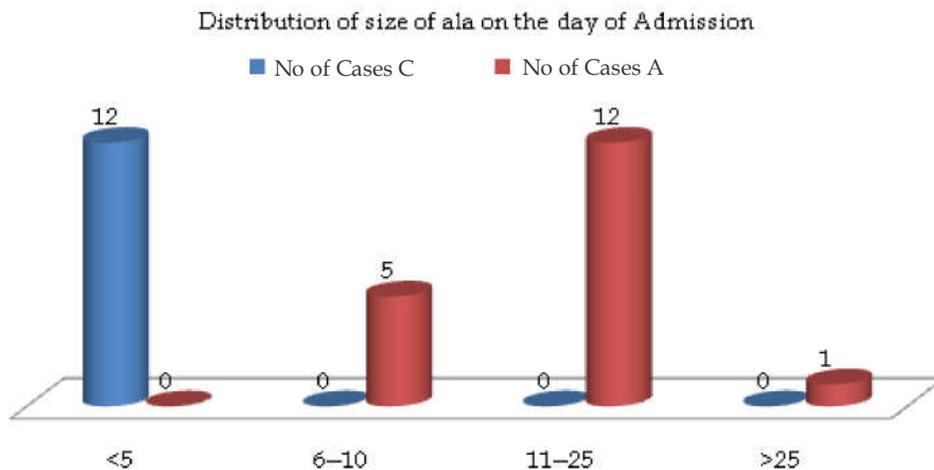


Fig. 8: Distribution of Size of ALA on day of Admission

Table 9: Treatment Modality

Treatment	No of Cases	Percentage
C	12	40
A	18	60
Total	30	100

Sixty percent of patients were treated by ultrasound guided percutaneous aspiration and 40% of patients were treated by conservative management (Table 9 and Fig. 9)

Table 10: Symptoms on day 4th of Treatment

Symptoms	Conservative	Aspiration
Day 4 Improved	10 (33%)	14 (47%)
Day 4 Not Improved	2 (7%)	4 (13%)

Ten patients treated by conservative management showed improvement and two patients had no improvement in clinical and laboratory signs and symptoms. Out of 18 patients treated by ultrasound guided percutaneous aspiration 14 patients had improved symptomatically (Table 10 and Fig. 10).

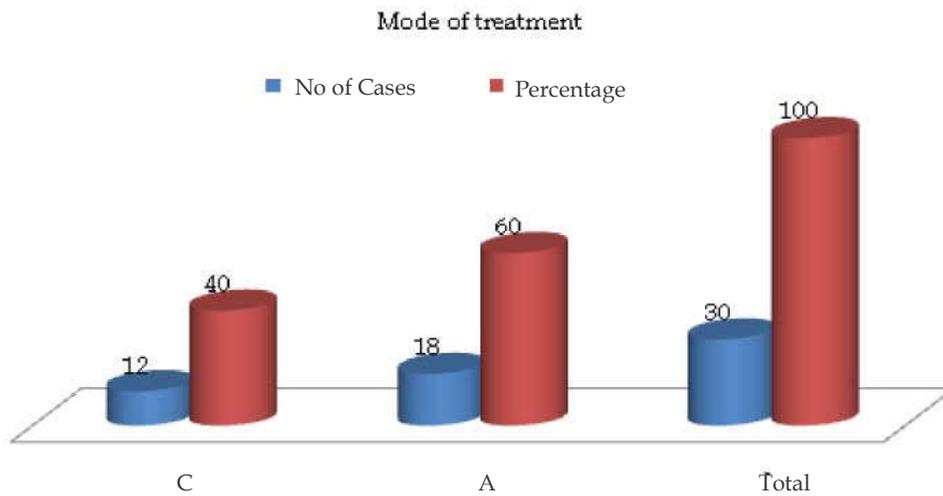


Fig. 9: Treatment Modality

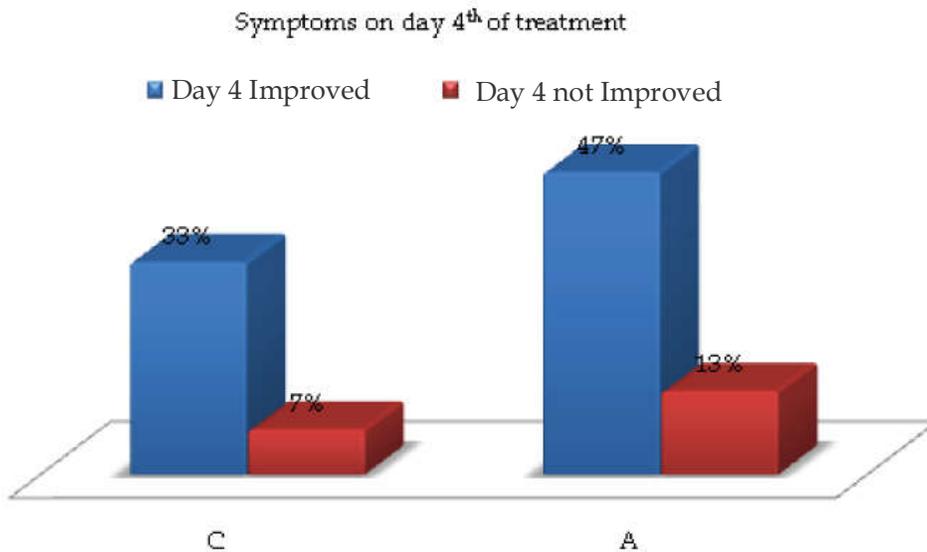


Fig. 10: Symptoms on day 4th of Treatment

Table 11: Distribution of Size of Ala on 4th day of Admission

Diameter of Abscess Cavity in cms	No of Cases	
	Conservative	Aspiration
<5	12	6
6-10	0	11
11-25	0	0
>25	0	1

Patients treated by percutaneous aspiration showed marked decrease in size of abscess cavity, as 6 patients were having cavities less than 5 cms and 11 patients in the range of 6-10 cms. Only one patient not improved (Table 11 and Fig. 11).

Table 12: Symptoms on day 10th of Treatment

	Treatment	Treatment		Total
		C	A	
Day 10	I	12	17	29
		100.0%	94.4%	96.7%
	NI	0	1	1
		.0%	5.6%	3.3%
Total		12	18	30
		100.0%	100.0%	100.0%

All patients treated either by conservative or percutaneous aspiration showed statistically significant ($p < 0.001$) symptomatic improvement, except one case with secondary infection (Table 12 and Fig. 12).

Table 13: Distribution of Size of ALA on 10th day of Admission

Diameter of abscess Cavity in cms	No of Cases	
	Conservative	Aspiration
<5	12	17
6-10	0	0
11-25	0	0
>25	0	1

All patients treated either by conservative or percutaneous aspiration showed statistically significant ($p < 0.001$) regression in size of amoebic liver abscess cavity, except one case with secondary infection (Table 13 and Fig. 13).

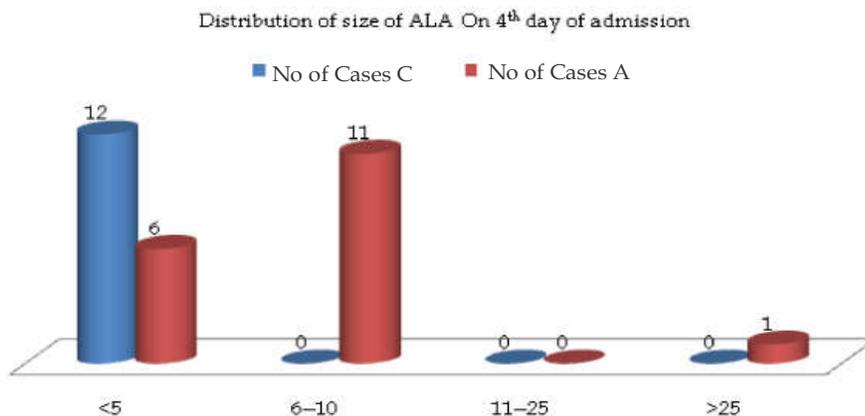


Fig. 11: Distribution of Size of ALA on 4th day of Admission

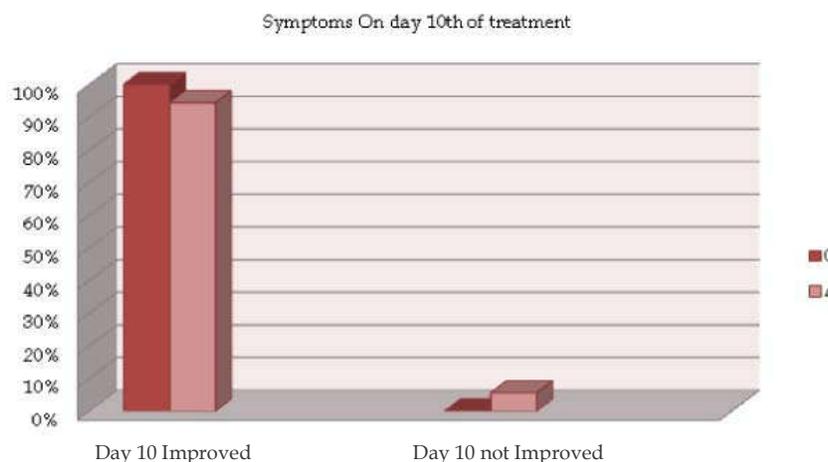


Fig. 12: Symptoms on day 10th of Treatment

Table 14: Distribution of LFT on 4th and 10th day of Treatment

LFT	I		NI		Total	
	freq	%	freq	%	freq	%
Day 4	16	53.3%	14	46.7%	30	100.0%
Day 10	29	96.7%	1	3.3%	30	100.0%

There is statistically significant ($p < 0.00$) improvement in liver function tests in all patients except one patient with secondary infection both on day 4 and day 10th of treatment (Table 14).

Table 15: Distribution of PUS and Culture Sensitivity and Serology

Tests	-		+		Total	
	freq	%	freq	%	freq	%
P/C	29	96.7%	1	3.3%	30	100.0%
AAA	3	10.0%	27	90.0%	30	100.0%

One patient was positive for pus culture and sensitivity and 27 patients were positive for anti amoebic antibody (Table 15).

Table 16: Duration of Stay in the Hospital

		Treatment		Total
		C	A	
Hospital stay	10-15	12	1	13
		100.0%	5.6%	43.3%
	16-20	0	7	7
		.0%	38.9%	23.3%
	Above	0	10	10
		.0%	55.6%	33.3%
Total		12	18	30
		100.0%	100.0%	100.0%

In our study duration of hospital stay is more in case of percutaneous aspiration as compared to conservative management (Table 16 and Fig. 14).

Table 17: Complications at the Time of Admission

Complications	No of Cases	Percentage
Rupture into peritoneal cavity	1	3.3
Rupture into plueral cavity	1	3.3

In our study one patient with secondary infection (*Klebseilla Pneumoniae* and *Escherichia coli*) had complication of abscess rupture into pleural and peritoneal cavity (Table 17 and Fig. 15).

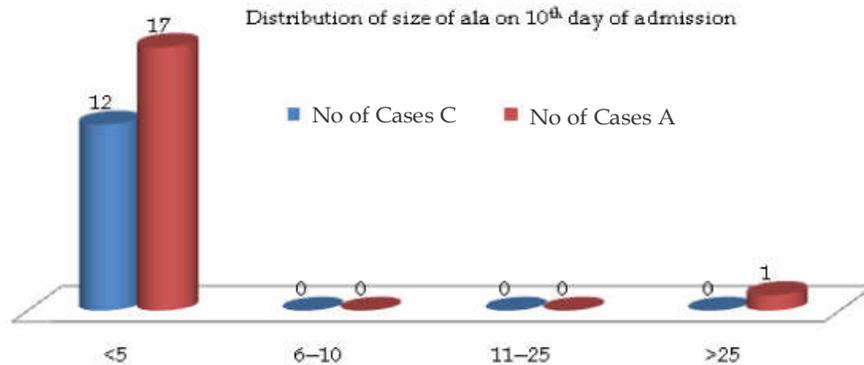


Fig. 13: Distribution of Size of ALA on 10th day of Admission

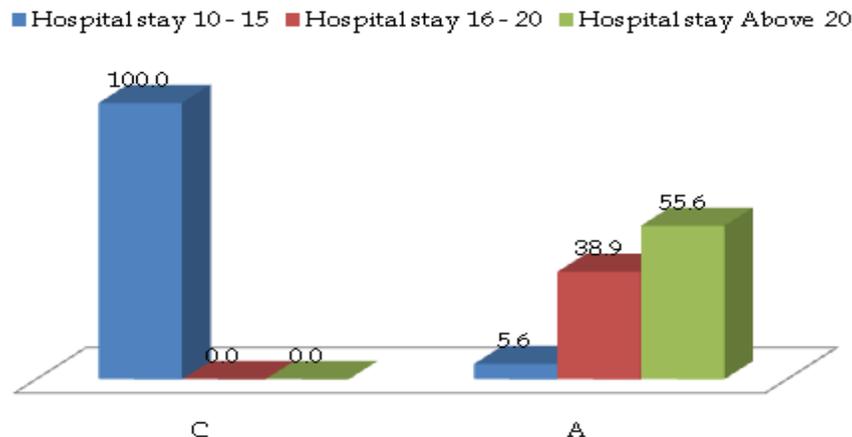


Fig. 14: Duration of Stay in the Hospital

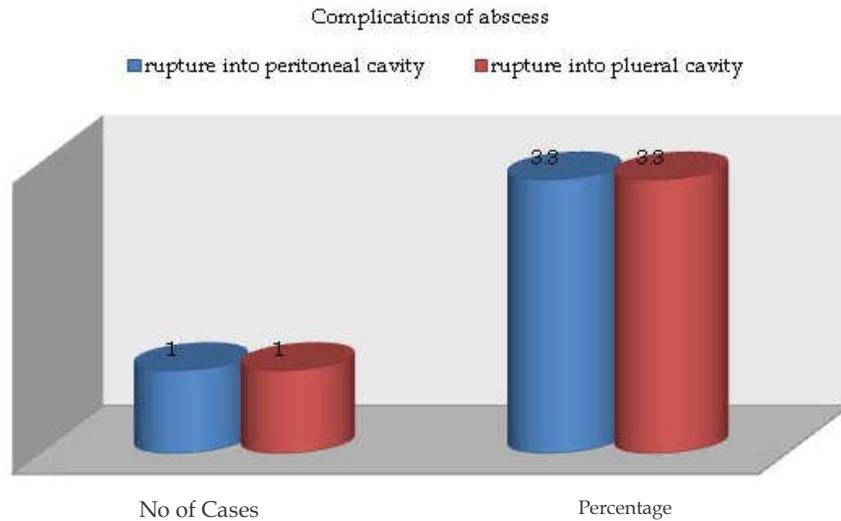


Fig. 15: Complications at the Time of Admission

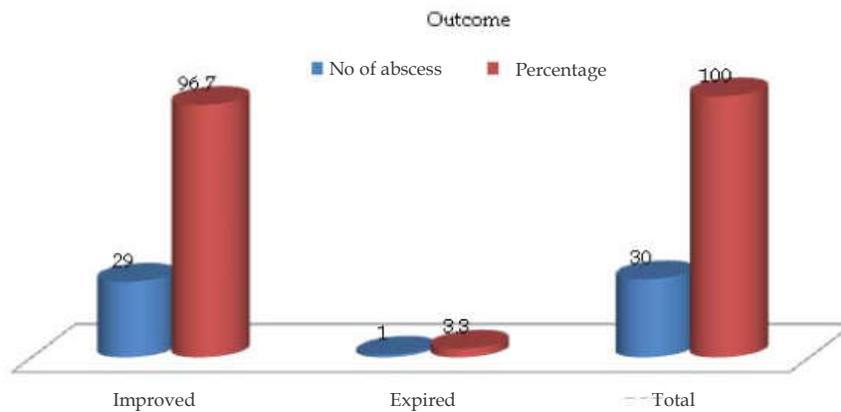


Fig. 16: Outcome

Table 18: Outcome

Outcome	No of Abscess	Percentage
Improved	29	96.7
Expired	1	3.3
Total	30	100

One patient expired in our study and remaining patients were recovered from the illness (Table 18 and Fig. 16).

Discussion

Worldwide, amebiasis, leading to liver abscess is the third most common parasitic cause of death. Except for *E.histolytica* the other species are regarded as non-pathogenic. 12% global incidence of infection and 50% of people may harbour amoebae in tropical and subtropical regions, ten times more common in

adults than in children, 3 to 10 times more common in males.⁴ Hence early diagnosis and treatment of the illness can prevent the complication and sequelae.

This study consists of 30 patients admitted to Vydehi institute of medical sciences and research centre, Bangalore. All cases met inclusion and exclusion criteria.

In the present study the common age group was found between 31–50 years comprising 16 (53.3%) cases. Similar results have been reported by several workers, which are comparable with the present study (Table 19).

Table 19: Age incidence of liver abscess in different studies

Authors	Age group	Percentage
Mishra <i>et al.</i> ⁵	30–40	82%
Turrill and Burnham ⁶	20–24	92%

Barbour and Juniper ⁷	21-50	84%
Aptekar and Sood	31-50	64%
Raghavan <i>et al.</i>	25-50	50.7%
Present study	31-50	53.3%

In our study 30 patients were included, 26 were males constituting 87% of the study population. In the present study the male to female ratio was 15:1. The increased ratio may be due to the fact the patients in our study belonged to the lower socioeconomic status and alcohol intake in the patients (Table 20).

Table 20: Sex incidence of liver abscess in different studies

Authors	Male (%)	Female (%)
Debakey and Oschner ³	93.4	6.6%
Habibullah <i>et al.</i> ⁸	91.8	8.2%
Galen <i>et al.</i> ⁹	85	15%
Turrill <i>et al.</i> ⁶	86	14%
Katzenstein <i>et al.</i> ¹⁰	85	15%
Present study	87%	13%

In present study out of 30 patients who had amoebic liver abscess, 26 were males (87%). The results of the present study are comparable with the study done other authors.

All the patients in the study were from lower socio economic status. It is well known that amoebiasis is common in slum dwellers due to bad sanitation, poverty, ignorance and their poor nutritional status.

The commonest clinical feature was pain abdomen in our study. Pain was a complaint in all the cases in this study (100%) it was present in right hypochondriac area of abdomen. The nature of the pain was dull aching in majority of the patients and sharp stabbing nature in few patients. The incidence of pain in various studies is compared with the present study in following table 21.

Table 21: Incidence of pain in various studies

Authors	Percentage
Kapoor <i>et al.</i>	100
Madangopal <i>et al.</i>	86
Debakey and Oschner ³	88.6
Mehta and vakil ¹¹	87.4
Katzenstein <i>et al.</i> ¹⁰	88
Present study	100

Fever was the next common symptom present in 25 cases (83%) in present series. In the majority of cases fever was of low grade and continuous. 20 (66%) of patients belonging to both conservative

and percutaneous aspiration; in which fever has subsided by day 4th of treatment. one case with secondary bacterial infection had persistent fever. The incidence of fever in the literature and the present study is compared in the following table 22.

Table 22: Incidence of fever in various studies

Authors	Percentage
Debakey and Oschner ³	87.0
Mehta and Vakil ¹¹	90.0
Galen <i>et al.</i> ⁶	94.0
Present study	83.0

In the present study 11 cases (37%) had history of diarrhoea in past week. This finding is comparable with other studies. But there is wide variation in reported studies. Craig has enumerated the findings of various authors. He states that 60-90% give previous history of diarrhoea/ dysentery.

Jaundice was seen in 5 (17%) of cases. Majority of them belonging to aspiration group. Kapoor *et al.* detected jaundice in few patients, Sharma *et al.* detected jaundice in 30% of the patients. 36% (11) of patients in our study were having hepatomegaly. In our study inter costal tenderness was noted in 8 cases (26%). In the present study one case (3.3%) with secondary bacterial infection had pleural effusion, which was very minimal in quantity. Raghavan *et al.* reported pleural effusion in 19 cases (15.5%) and consolidation of the right lung base in 45 of 126 cases studied 86. Chuttani *et al.* studied 135 cases and manifestations of right basal plueropulmonary involvement were found in 27 patients (20%). Involvement of pleura manifested as dry pleurisy in 5 cases, pleurisy with effusion in 17 cases and bursting of liver abscess into pleura into 2 cases. Lung involvement resulted into collapse in 2 cases, consolidation in 3 cases and bursting of liver abscess into lung in 1 case.

In the present study, the mean duration of symptoms at presentation in the conservative group was 7.5 days. While the mean duration of symptoms in percutaneous aspiration group was 7 days. Statistically significant difference were found between the two groups { $p < 0.05(0.003)$ }. Studies in literature have reported the shortest duration was one day and the average was from ten days to two weeks in acute group; in the chronic group, the longest duration was three years and the average from three to six months. The average duration of symptoms has also been reported to be 2½ months (range 8 days to 9 months), which

is at variance with another report that the average duration of presentation was 2 to 12 weeks. The present average duration of symptoms in our study is, therefore, same as reported in earlier studies. W B C counts were ranging between 4600–13000 cells/ cu mm. mean counts were 8238 and Standard Deviation was 2007. This is one of the parameters in assessing the improvement after initiation of the drug therapy.

Usually polymorpho-nuclear leucocytes predominate. The correlation between degree of anaemia, leucocytosis and duration of illness reveal that patients with a short history tend to show no anaemia but appreciable leucocytosis, where as those with long history show appreciable anaemia with less marked leucocytosis. In the present series higher leucocytes count were noted in patients with acute history associated with moderate anaemia. Anaemia is one of the common findings accompanying liver abscess. Haemoglobin of less than 12 gms was found in 5 cases (17%) in this study. Anaemia is very common in chronic cases and is due to chronic infection. Adams and Macleod found anaemia in 63% cases of their cases studied. They studied serum iron and bone marrow and found it to be normal and concluded anaemia to be due to the presence of chronic infection. The serum Bilirubin was raised (>1 mg/dl) in 7 cases (23%) of the present study. 16.7% of patients treated conservatively and aspiration respectively had raised serum Bilirubin. M.P. Sharma *et al.* found 50.4% patients to have raised Bilirubin. Out of 30 cases of amoebic liver abscess in the present study none of cases had *Entamoeba histolytica* cysts in the stools.

In our study Amoebic serology (anti amoebic antibody) was positive in 27 patients Kraoul compared the capability of rapid enzyme immuno assay (EIA) to detect Antiamoebic antibodies during hepatic amebiasis with those of indirect haemagglutination and latex agglutination. Enzyme immuno assay of 143 sera yielded a specificity, a sensitivity, and positive and negative predictive values of 100, 93, 100, and 97.1, respectively. This test could thus be considered another valuable tool for the diagnosis of hepatic amebiasis. A study in central Vietnam had reported a 94.5% prevalence of anti-amoebic antibodies in cases of amoebic liver abscess. Asymptomatic carriers of *E. Histolytica* are also known to develop antibodies, thus serological tests are helpful in assessing the risk of invasive amoebas in asymptomatic cyst passers in an endemic area. The value this diagnostic test in the setting of acute disease in endemic areas is less

because they remain positive for many years.

In the present study Most of the of patients 21 (70%) had right lobe amoebic liver abscesses; 5 (17%) patients had abscesses in Left lobe and both lobes of liver involved in 4 (13%) of the patients. 22 (73%) out of 30 (100%) patients had one abscess; 6 (20%) had two abscesses. 2 (7%) patients had 3 abscesses. Galen *et al.* in their studies showed that the majority of the amoebic liver abscesses were solitary.⁶ Our study was consistent with their study.

Amoebic liver abscesses were studied by Navneet Sharma *et al.* in 86 indoor cases in a North Indian hospital. Their findings in the ultrasound showed 65% of right lobe abscesses, left lobe being 13% and multiple abscesses in 22%. The mean diameter of abscess cavity in a conservative group was 2.75 cms (range: 1.0 to 5.0 cm). The mean diameter of abscess cavity in percutaneous aspiration was 11.67 cms (range: >5.0 to 25.0 cm). Other studies had reported the mean largest abscess diameter as 7.0 cm. In the present study elevation of right hemi diaphragm was found in 11 patients (36%) and one (3.3%) patient with minimal pleural effusion on right side. Similar findings have been reported by the various workers. In our study 12 (40%) patients were treated conservatively and 18 (60%) patients were treated by percutaneous aspiration and conservative management. In our study; liver abscess aspiration was done in 20 patients (66.6%). The amount of pus drained, varied from 50 to 300 ml. The colour of the pus, which was aspirated from the liver, was Anchovy sauce in colour. In one patient it was reddish green that has secondary bacterial infection. If the abscess is connected with the biliary tree then the aspirate is greenish.

In our study the pus in 29 cases was sterile bacteriologically and trophozoites of *E.histolytica* were not demonstrated in any one of them. Barbour and Juniper; in 33 cases of amoebic liver abscess, could find trophozoites in the pus of only 4 cases.⁷ 10 cases had trophozoites in the walls of the abscess cavity. Katzenstein *et al.* rarely found *Entamoebahistolytica* in their series of 67 cases.¹⁰ Lamont and Wicks found *Entamoeba histolytica* in 11% of their cases.

In our study none of the cases of amoebic abscess; surgical drainage was employed. Out of 12 patients who were treated conservatively, 2 cases have not responded to conservative treatment; in whom, ultrasound-guided aspiration was performed. Rest of 10 cases have been treated using conservative line of treatment and they have responded very well. Out of 18 patients

who were treated by percutaneous aspiration responded well to the treatment and one patient not responded to aspiration and conservative management; died due to complications. The patient had secondary infection, signs of right sided pleural effusion and rupture of abscess into pleural and peritoneal cavity. Patient died on 25th day due to septicaemia.

In our study clinical, biochemical and ultrasound findings at the time of admission, on day 4th and on day 10th were considered to know the efficacy of conservative management and percutaneous aspiration of amoebic liver abscess. Out of 12 patients who were treated by conservative treatment: 2 patients were converted to pigtail catheter drainage due to persistent of fever, increased WBC count, deranged liver function tests even on day 4 of the treatment. All patients with the initial insertion of pigtail catheter improved and did not require change in the modality of treatment.

Regarding conservative treatment there are no studies indicating drawbacks of prolonged conservative treatment and there are no studies which shows efficacy of needle aspiration in such cases. In our study 11 patients had lost the follow up and one case died and in remaining cases cavity were completely resolved. But resolution of cavity size was earlier in case of percutaneous aspiration as compared to the delayed resolution in case of conservative treatment. On the basis of ultrasound findings; when the size of abscess was found to be markedly decreased; pigtail catheter removal done. The period ranged from 10 to 45 days with the mean of 15.6 days. Thus our study clearly proves that the improvement in clinical and laboratory parameters in case of conservative treatment (where cavity size less than 5 cms) on day 4th and day 10 was statistically significant; which is similar to percutaneous aspiration group. However the rate of decrease in size of the abscess cavity was lesser in the conservative group than in percutaneous aspiration group. The study clearly indicates that uncomplicated abscess measuring less than 5 cms are better treated by conservatively and cavities more than 5 cms are treated by ultrasound guided percutaneous aspiration.

Conclusion

- Amoebic liver abscess is commonly seen in young to middle aged males.
- Ultrasonography helps in early diagnosis

and reducing morbidity and mortality. Liver function tests helps in knowing the effectiveness of the treatment and prognosis. Amoebic liver abscess <5 cms are effectively treated by conservative management and abscess >5 cms by percutaneous aspiration. Resolution of abscess cavity is faster in patients treated by percutaneous aspiration as compared to conservative treatment. Metronidazole effective in most of the amoebic liver abscess. Mortality encountered in one patient with secondary infection of amoebic liver abscess.

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