

## A Prospective Study of Cases on Liver Abscess in Government Mohan Kumaramangalam Medical College and Hospital, Salem

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### ABSTRACT

**AIM:** To determine Incidence, Age and Sex Incidence and to evaluate various clinical parameters of both uncomplicated and complicated Liver Abscess and various modalities of treatment available and to know prevalence occurring as abdominal emergencies

**METHODS:** The materials used in the study consisted of 80 cases of liver abscess which were admitted in all surgical wards of Government Mohan Kumaramangalam Medical College and Hospital, Salem during January 2019 – January 2020.

**RESULTS:** Males are most commonly affected with Liver Abscess and 40-50 years is the most commonly affected age group. Most of the Liver Abscess presented with Right Upper Quadrant pain without peritonitis. Single Right Lobe Liver Abscess is the predominant presentation. E.Coli is the most commonly associated organism and majority of the patients underwent aspiration successfully.

**CONCLUSION:** Incidence of liver abscess is 2.7% of total admissions in our hospital. Incidence of Amoebic liver abscess very common in our study. The ratio of amoebic liver abscess: pyogenic liver abscess being 5:3. About 82% of patient were alcoholic. Male predominates both in amoebic and pyogenic liver abscess in the ratio of 7:1. Anemias, Leucocytosis were common Accompaniments. Commonest symptom is abdominal pain and fever, sign being tender hepatomegaly and Intercostal Tenderness. Only 14% of patients presented with Jaundice. Right Lobe was predominantly involved in the ratio of 7:3. . Out of 80 cases treated, 30 cases were treated conservatively, 40 cases required aspiration, 5 cases required percutaneous catheter drainage and 5 cases required open drainage. . Mortality in our series : Uncomplicated liver abscess : No mortality; Ruptured into abdominal cavity : 1 death.

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### I. Introduction

Liver abscess often presents challenges to surgical diagnostic area. Early diagnosis and prompt initiation of treatment leads to complete cure.

Of the two types of hepatic abscess, the Amoebic and Pyogenic Abscess, Amoebic abscess seems to be more prevalent in our country. Because studies of Hepatic abscess especially amoebic abscess have often originated from endemic areas, they offer little information on the application of modern diagnostic techniques. Diagnosis in this area mainly depends on the clinical presentation. But since the introduction of Ultra sonogram and CT Scan as a diagnostic device a more Accurate diagnosis can be made in every case.

In 500 cases of Liver abscesses admitted in Government Mohan Kumaramangalam Medical College and Hospital in the year 2019-2020. Out of 500 cases, 80 cases were selected and discussed in this study.

### II. Aims And Objective

To determine Incidence, Age and Sex Incidence and to evaluate various clinical parameters of both uncomplicated and complicated Liver Abscess and various modalities of treatment available and to know prevalence occurring as abdominal emergencies.

### III. Materials And Methods

#### STUDY AREA

Government Mohan Kumaramangalam Medical College and Hospital

#### STUDY POPULATION

Patients admitted in all surgical wards of Government Mohan Kumaramangalam Medical College and Hospital with diagnosis of Liver Abscess between January 2019 – January 2020.

#### INCLUSION CRITERIA:

1. Enlarged and tender liver.
2. Presence of Macroscopic and Microscopic features of pus in the liver.

3. Culture and sensitivity of aspirated pus.
4. Radiological evidence of raised and fixed right dome of diaphragm.
5. Ultrasonogram evidence of liver abscess.

**EXCLUSION CRITERIA:**

Clinical and Radiologically confirmed cases of Liver cyst, Liver Malignancy.

**STUDY PERIOD:**

January 2019 – January 2020

**SAMPLE SIZE:**

80 cases

All patients eligible by inclusion and exclusion criteria are to be included in the study.

**STUDY DESIGN:**

A Prospective study is to be conducted on patients admitted in surgical wards of Government Mohan Kumaramangalam Medical College and Hospital , Salem with diagnosis of Liver Abscess.

Informed consent will be taken from each respondent.

**METHODS:**

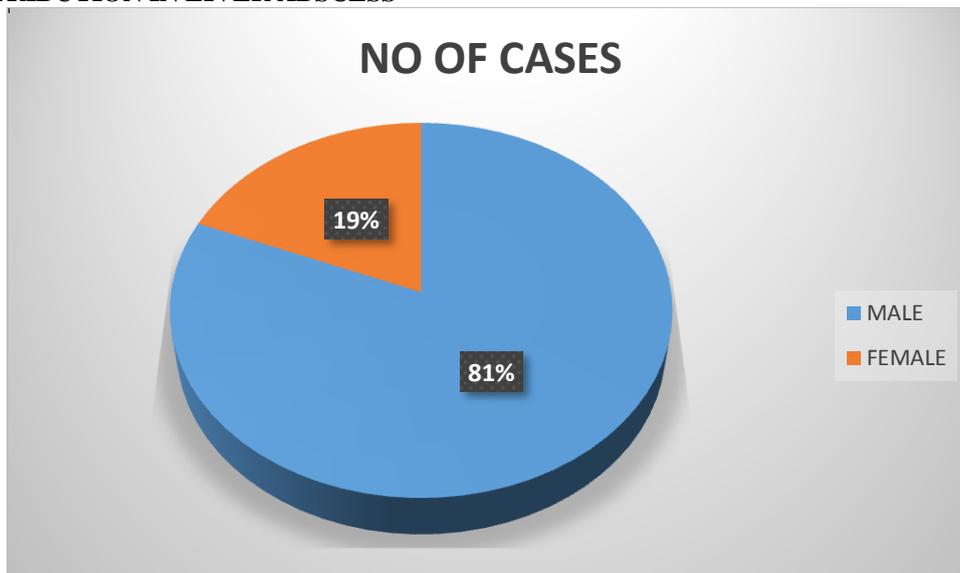
Details of the cases will be recorded including age, sex, clinical parameters, radiological investigations, distribution of abscess, modes of treatment, Bacteriological culture study of pus aspirate.

**IV. Results**

**AGE DISTRIBUTION IN LIVER ABSCESS**

Age in years	No. of Cases	Percentage
10-20	2	2.5
21-30	5	6.25
31-40	25	31.25
41-50	30	37.50
>50	18	22.50

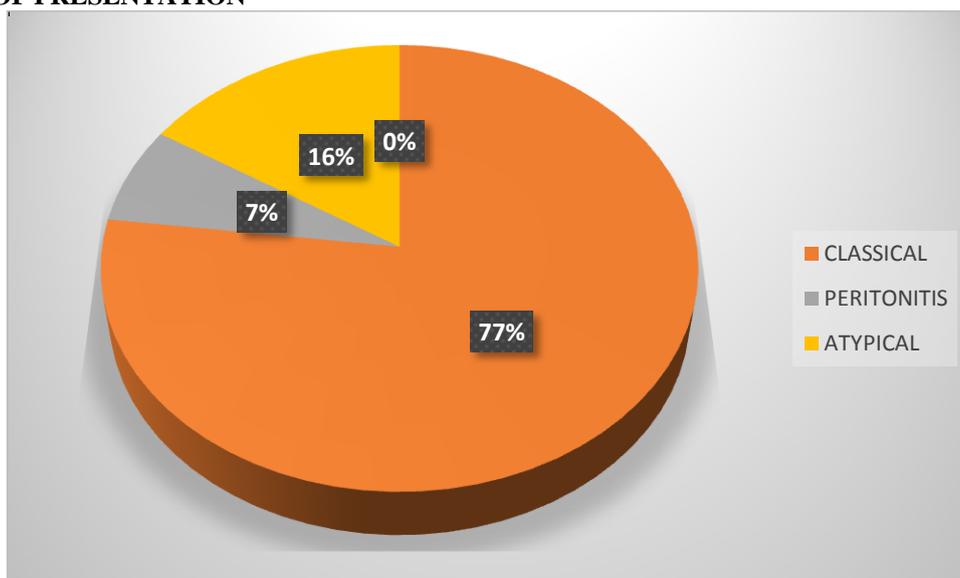
**SEX DISTRIBUTION IN LIVER ABSCESS**



**CLINICAL PRESENTATION**

Clinical Features	No. of Cases	Percentage
Abdominal pain	75	94
Intercostal Tenderness	32	40
Enlarged Liver	36	45
Fever	51	64
Dysentery	5	6
Nausea and Vomiting	19	24
Anorexia	29	36
Loss of Weight	15	19
Jaundice	10	14
Hiccup	3	4
H/O Alcohol	65	81

**MODES OF PRESENTATION**



**HEMATOLOGICAL INVESTIGATIONS**

Investigation	Value	No. of Cases	Percentage
Hemoglobin	7-10 gm/dl	54	67
	10-14 gm/dl	26	33
WBC count	5000 – 10000 cells/cu.mm.	33	42
	10000 – 15000 cells/cu.mm.	41	51
	>15000 cells/cu.mm.	6	7
ESR	<15mm	8	10
	>15mm	72	90

**LIVER FUNCTION TESTS**

Investigation	No. of Cases	Percentage
Increased Bilirubin	42	53
Increases Serum Alkaline Phosphatase	44	55
Decreased Serum Albumin	17	21

**RADIOLOGICAL INVESTIGATIONS**

Radiological Feature	No. of Cases	Percentage
Raised dome of Diaphragm	34	42.5
Pleural effusion	9	11.25
Basal Atelectasis	7	8.75
Enlarged Liver	15	31.25
Ground Glass appearance	5	6.25

**ULTRASONOGRAM – SIZE OF ABSCESS**

Size in cm	No. of Cases	Percentage
<5	16	20
5 - 10	43	54
>10	21	26

**DISTRIBUTION OF ABSCESS**

Right lobe		Left lobe		Both Lobes
56(70%)		12(15%)		12(15%)
Single	Multiple	Single	Multiple	
40(50%)	16(20%)	12(15%)	Nil	

**MODES OF TREATMENT**

Mode of Treatment	No. of Cases	Percentage
Conservative	30	37.5
Aspiration	40	50
Percutaneous catheter drainage	5	6.25
Open Drainage	5	6.25

### BACTERIOLOGICAL CULTURE STUDY OF PUS ASPIRATED

No of persons found to have bacterial growth	Organisms isolated
25 (31%)	E.Coli ( Common) Klebsiella Pseudomonas Polymicrobial abscess Streptococci viridians Enterococci

### V. Discussion

In our study out of 22,000 cases admitted in our hospital in 2019 to 2020. We are reported about 80 cases of liver abscess. Incidence being 2.7%. In our study peak age incidence was noticed in 4th decade followed by 5th and 6th decade. In our study there is more number of cases in low socio economic status. According to Garewal the highest incidence was noted in people who consume alcohol and also in people who live with poor hygienic conditions, contaminated drinking water, malnutrition, hepatic dysfunction and low host resistance.

Highest incidence of liver abscess in males 87% in our study has been attributed to alcoholism, (Present study H/o alcoholism was present in 82% cases.) This correlates with the study of Oschner & Debakay which predispose to hepatitis. Alcohol produces heptaocellular damage and may make it prone to develop hepatic abscess – Sheila – Sherlock.

In our study commonest symptom being abdominal pain and fever. Commonest sign being Intercostal Tenderness and Tender hepatomegaly.

In present study, anemia was noted in 67% cases and Jaundice in 14% patients especially in Pyogenic liver abscess patients.

Data concluded in his study that Jaundice in liver abscess is primarily of cholestatic origin. Intrahepatic cholestasis which is due to compression of Both hepatic ducts. Though Lamot and Pooler, Vakil et al, Hazra et al have noted an increase mortality in liver abscess with Jaundice we have not encountered such thing in this study.

In our study the sensitivity of ultrasonogram is around 97%. However false positive results (3%) was encountered in this study turned out to be degenerating Hepatomas.

Out of 80 cases studied, for about 30 conservative treatments was given. In the present study we had a protocol of managing the liver abscess of size less than 5 cm on ultra sonogram with conservative management (drugs).

We used to treat the amoebic liver abscess patients with Ciprofloxacin 200 mg twice daily, metronidazole 500mg thrice daily both parenterally for five days (and then changed to oral preparation) along with chloroquine 300 mg twice daily orally.

Pyogenic liver abscess were treated first with empirical antibiotics – Ampicillin, Gentamycin and Metronidazole, or 3rd generation cephalosporin and Metronidazole then changed according to culture and sensitivity. Most of the patients (90%) resolve and do better with conservative management. About 10% patients whose size doesn't decrease with antibiotics even after 4-5 days were aspirated under ultrasound guidance.

Out of 80 cases studied, for about 40 cases closed needle ultrasound guided aspiration was done. We did aspiration using 14 gauge needle for the patients in whom conservative line of management fails and for abscess of more than 5 cm size.

We did laparotomy and open drainage for 5 cases which were presented as

- Acute abdomen where abscess burst presenting as perforated peptic ulcer, pancreatitis, ileal perforation or as perforated appendicitis.
- Patients not responding to aspiration/antibiotics.
- For large multiple abscess.

### VI. Conclusion

Out of 80 cases taken out for study majority presented with classical features.

- Incidence of liver abscess is 2.7% of total admissions in our hospital. Incidence of Amoebic liver abscess very common in our study. The ratio of amoebic liver abscess: pyogenic liver abscess being 5:3
- About 82% of patient were alcoholic
- Male predominates both in amoebic and pyogenic liver abscess in the ratio of 7:1
- Anemias, Leucocytosis were common Accompaniments.
- Commonest symptom is abdominal pain and fever, sign being Tender hepatomegaly and Intercostal Tenderness.
- Only 14% of patients presented with Jaundice.
- Right Lobe was predominantly involved in the ratio of 7:3
- Clinical diagnosis of liver abscess is straight forward except for those presenting with complications.

9. Only 15% of patients, we are able to isolate E. Histolytica from stool and 9% from PUS.
10. Out of 80 cases treated, 30 cases were treated conservatively, 40 cases required aspiration, 5 cases required percutaneous catheter drainage and 5 cases required open drainage.
11. Ultrasound is the commonest and most useful investigation for diagnosis, treatment as well as follow up.
12. Age incidence: Higher incidence of liver abscess in age group of between 40-50 years.
13. CT Scan mainly reserved for doubtful cases and those presenting with complications.
14. In our series, there is more number of abscess seen in low socioeconomic status patients. 30% of patients are in High Socio Economic status, 70% of patients are in low Socio Economic Status.
15. Mortality in our series  
Uncomplicated liver abscess : No mortality  
Ruptured into abdominal cavity : 1 death

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