

EPIDEMIOLOGICAL, CLINICAL FEATURES, MANAGEMENT PROFILE & OUTCOME IN PATIENTS OF LIVER ABCESS: A TERTIARY CARE CENTRE EXPERIENCE OF GWALIOR, MADHYA PRADESHMukesh Singh Narwaria¹, Himanshu Chandel², Vivek Patel³, Amir Jain⁴**HOW TO CITE THIS ARTICLE:**

Mukesh Singh Narwaria, Himanshu Chandel, Vivek Patel, Amir Jain. "Epidemiological, Clinical Features, Management Profile & Outcome in Patients of Liver Abscess: A Tertiary Care Centre Experience of Gwalior, Madhya Pradesh". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 87, October 29; Page: 15258-15268, DOI: 10.14260/jemds/2015/2169

ABSTRACT: Liver abscess is a common and major health problem in the lower socio-economic group. Evolution in diagnostics and treatment methodology has resulted in marked reduction in morbidity and mortality associated with liver abscess. Today with improved antibiotics and operative techniques, we could achieve much better response in patients with liver abscess. **AIM:** The aim of the study was to review the demographic data, etiological profile, predisposing factors, variation in clinical presentation in liver abscesses & to formulate management plan in liver abscess. **METHODS:** This retrospective study was conducted at the Department of General Surgery, Gajra Raja Medical College Gwalior and Jaya Arogya Group of Hospitals, a tertiary care centre in Gwalior by reviewing all admitted patients with suspected liver abscess from the period of May 2013 To May 2015 to analyze etiological profile (Etiological & predisposing factors), variation in clinical presentation in liver abscesses, laboratory & microbiological profile and to formulate management plan in liver abscess. **RESULTS:** Pyogenic & Amoebic liver abscess is most common in 5th & 4th decade of life with male to female ratio of 17:1. Alcohol consumption, Diabetes Mellitus & low socio economic status are important predisposing factors. Most common presenting complain & clinical finding is abdominal pain & RUQ tenderness respectively with intraperitoneal rupture is most common complication. On ultrasound most abscess are solitary, in right lobe of liver & having greater than 150cc of volume. E. coli is commonest among pyogenic while E. histolytica is common in amoebic liver abscess, earlier respond better with pigtail drainage while later with percutaneous aspiration with antibiotics. **CONCLUSION:** The commonest presentation was young male, alcoholic of low socioeconomic class having right lobe solitary amoebic liver abscess. Appropriate use of minimally invasive drainage along with intravenous antibiotics techniques reduces mortality.

KEYWORDS: Liver Abscess, Pyogenic liver abscess, Amoebic liver abscess, E.histolytica.

INTRODUCTION: Liver abscess is a collection of purulent material in liver parenchyma resulting from the invasion and multiplication of microorganisms which can be due to pyogenic, amebic, fungal or mixed infection. Liver is the organ most subjected to the development of abscesses, liver abscess made up to 13% of the total number of abscess or 48% of visceral abscess.¹ Liver abscess has been recognized since Hippocrates (Circa 400 B.C.) who speculated that the progress of the patients were related to the type of fluid within the abscess cavity.²

Amoebic liver abscess is more common than pyogenic liver abscess (PLA) on a global scale, but in tropical areas like India both amoebic and pyogenic liver abscess continues to be an important cause of morbidity and mortality.³ the world health organization reported that Entamoeba histolytica causes approximately 50 million cases and 100,000 deaths annually.⁴

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The vast majority of these infections are acquired in the developing countries like India where majority of population lives below poverty line and basic sanitary facilities are lacking. This coupled with overcrowding, urban slums and also outdoor unhygienic eating habits sets the stage for communicable diseases like amoebiasis. Locally made alcoholic drinks like Neera, Arrack may be the faeco-oral route for amoebic cysts.

In developed parts of the world, pyogenic liver abscess is relatively common to amoebic liver abscess. Pyogenic infections may be due to portal infection, and may be of biliary, arterial, or traumatic origin (Often in young people secondary to acute appendicitis, and other intra-abdominal inflammatory condition). Ascending infection of the biliary tree secondary to obstruction is now the most identifiable cause of PLA. Immunosuppression as in AIDS, intensive chemotherapy or transplant recipients is also increasing the number of liver abscesses due to opportunistic organisms in India.⁵ Between 15 to 55% patients in different series, no identifiable cause or source for PLA was found (Hence called cryptogenic).^{6,7,8}

Though a readily treatable disease, if left untreated, liver abscess can be potentially fatal, leading to mortality ranging from 60-80%.⁹ However, with the advances in radiological investigations like ultrasonography and CT scan for diagnoses together with interventional radiology has reported a success rate ranging from 75-100% for treatment of liver abscess, decreasing mortality to 5-30%, and surgical intervention which is associated with significant morbidity and mortality ranging from 10-47% is now becoming unnecessary.¹⁰

With this changing scenario in incidence, environmental conditions, diagnostic methods, treatment and complications associated with liver abscess has inspired us to do in-depth study regarding epidemiological profile, changing trends in clinical profile, microbiological aetiology, diagnosis and management outcomes of patients diagnosed with liver abscess.

METHODOLOGY: This retrospective study was conducted at the Department of General Surgery, Gajra Raja Medical College and Jaya Arogya Group of Hospitals, Gwalior a tertiary care centre in Gwalior. Data of all admitted patients with the diagnosis of suspected liver abscess in Department of General Surgery, Gajra Raja Medical College and Jaya Arogya Group Of Hospitals, Gwalior from the period May 2013 To May 2015 was reviewed to analyze the epidemiological profile (Etiological & predisposing factors), variation in clinical presentation in liver abscesses, laboratory & microbiological profile and to formulate management plan in liver abscess. Total of 200 consecutive patients diagnosed as having liver abscess on ultrasound were included.

The inclusion criteria were as follows:

1. Age above 15 yrs.
2. Single or multiple hepatic lesions in ultrasound imaging.

After reviewing all the diagnosed cases of liver abscess following sets of data were extracted:-

1. Demographic profile, clinical features & clinical examination, of the patients were taken as per case sheets.
2. Laboratory & Imaging profile of the patients were taken as per case sheets.
 - a) Complete hemogram, liver function test, kidney function test, and coagulation profile (PT/INR).
 - b) Serologies for Entamoeba histolytica, HIV, and hepatitis B and hepatitis C viruses.

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- c) Aspirate report for wet mount for trophozoites of *Entamoeba histolytica*, Gram's staining, ZN staining for AFB and Culture & Sensitivity.
- d) Ultrasound feature of liver abscess like single or multiple, organised or partially/completely liquefied, ruptured or unruptured.
1. Treatment plan given to patient as per patient's status & ultrasound results.

All data were collected in MS-excel sheet & analysed using statistical software package SPSS version 20.

RESULTS:

Epidemiological Profile of Patients Studied:

Epidemiological	Pyogenic (N=143)	Amoebic (N=57)	Total (N=200)
Age (In years)			
15-20	3(2)	6(10)	9(6)
21-30	14(10)	16(28)	30(15)
31-40	18(12.5)	21(37)	39(19.5)
41-50	35(25)	14(26)	49(24.5)
51-60	45(32)	0(0)	45(32)
>60	28(20)	0(0)	28(14)
Gender			
Female	7(5)	4 (7)	11(10.5)
Male	136(95)	53 (93)	189 (94.5)
Socioeconomic			
Grade I (Upper)	1(0.69)	1(1.75)	2(1)
Grade II (Middle)	19(13.28)	6(10.57)	27(13.5)
Grade III (Lower)	121(85)	50(87)	171(85.5)

Table 1

- Age of the patients included in this study varied from 17-70 years. The mean age was 36.5years. The highest incidence was noted in the age group of 41-50 years (25.5%) and 51-60 years (32%).
- Of all the studied patients, 94.6% of patients were male and 5.5% were female.
- Most of the patients belong to lower & middle SES (99%) while only 2 cases reported in upper class (1%).

Predisposing Factor in Patients of Liver Abscess:

Predisposing Factors	Pyogenic (N=143)	Amoebic (N=57)	Total (N=200)
Biliary Tract Ds	13(8)	6(11)	19(9.5)
GI Tract Ds	21(15)	6(11)	27(13.5)
Alcoholic	110(76.9)	37(64.9)	147(73.5)
Diabetes Mellitus	96(67.1)	17(14)	113(40.5)
Immunocompromised	10(7)	7(14)	17(8.5)
HIV +	2(1.39)	1(1.75)	3(1.5)
HBsAG +	8(5.59)	7(12.28)	15(7.5)

Table 2

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- Out of 200 patients 147 were alcoholic (73.7%) while 113 patients (40.5%) had Diabetes mellitus as predisposing factor.
- Both alcoholism as well diabetes were most influential predisposing factor in both types of liver abscess.
- All patients in this study were tested for HIV and HBsAG serology. Only 15 out of 200 (7.5%) of cases were found to have Positive HBsAG (Equal in both types) while 3/200(1.5%) of the patients found HIV positive (Pyogenic > amoebic).

Frequency of Clinical Features & Signs:

Frequency	Pyogenic (N=143)	Amoebic N=57)	Total N=200)
Symptoms			
Pain In Abdomen	143(100)	57(100)	200(100)
Fever	134(94)	31(55)	165(82)
Pruritus	133(93)	0(0)	133(66.5)
Diarrhea	77(54)	8(10)	85(42.5)
Cough	33(23)	8(10)	41(20.5)
Chest Pain	23(16)	3(5)	26(13)
Clinical Signs			
Pallor	15(10)	3(5)	18(9)
Icterus	15(10)	3(5)	18(9)
Abdominal Tenderness	143(100)	57(100)	200(100)
Hepatomegaly(>14cms)	130(90)	36(63)	166(83)
Guarding/Rigidity	43(30)	20(35)	64(32)

Table 3

- Abdominal pain was most common presenting complain (100% of patients) followed by Fever 82/200(82%). Pruritus & change in bowel habits like diarrhea were standout featuring while comparing pyogenic to amoebic abscess.
- Similarly abdominal tenderness was most common clinical finding (100% of patients) followed by hepatomegaly (83%).
- Guarding & rigidity were present in 32% of cases most of them were ruptured liver abscess.

Laboratory Investigations:

Laboratory Investigations	Pyogenic (N=143)	Amoebic (N=57)	Total (N=200)
Hemoglobin <10gm/dl	110(76.92)	41(71.92)	151(75.2)
TLC >11000cells/cumm	98(68.5)	33(58)	131(65.5)
RBS >110gm/dl	19(13.3)	14(25)	33(16.5)
ESR >20mm/hr.	140(97.3)	54(95)	194(97)
S. albumin(<3mg/dl)	44(30.6)	48(84)	92(46)
ALP >140 IU/L	74(52)	15(25.5)	89(44.5)
SGOT>40 IU/L	105(73.3)	23(39.5)	128(64)
SGPT>40 IU/L	118(82.6)	24(42)	142(71)
Prolonged PT (>14 seconds)	118(82.6)	43(75)	161(80.5)
Total S. Bilirubin (>1.2mg/dl)	86(60)	19(32.5)	105(52.5)

Table 4

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- Most common abnormality in lab investigations were ESR (97%) followed by prolonged PT (80.5%), anemia (75.2%), leukocytosis (65.5%) increased SGPT & SGOT (71% & 64%) and increased total serum Bilirubin (52.5%)
- Alteration from normal level of Liver Enzymes (More common in pyogenic liver abscess) & Serum Albumin (More common in amoebic liver abscess) were differentiating featuring among pyogenic & amoebic liver abscess.

USG Findings in Patients of Liver Abscess:

USG Findings	Pyogenic (N=143)	Amoebic (N=57)	Total (N=200)
Lobe Involved			
Right Lobe	115(80.5)	44(77)	159(79.5)
Left Lobe	22(15)	13(6.5)	35(17.5)
Bilateral	6(3)	0(0)	6(3)
No Of Abscess			
Solitary	108(75.5)	53(92.98)	161(80.5)
Multiple	35(24.5)	4(7)	39(19.5)
Ruptured	28(19.58)	4(7.1)	32(16)
Volume			
>150 cc	122(85.3)	46(80)	168(82.5)
<150 cc	21(14.7)	11(20)	33(16.5)

Table 5

- USG abdomen was done in all cases. Isolated right lobe abscess was the most common finding seen in out of 159/200(79.5%) of cases, Left lobe abscess was seen in 35/200(17.50%) of cases. Both lobe involvement was seen in 6/200(3%) of cases.
- Solitary abscess being the most common presentation found in 161/200(80.5%) cases. Multiple lobe liver abscesses were seen in 39/200(19.5%) cases.
- Ruptured liver abscess more common in pyogenic >amoebic (19.58 % vs. 9.3%).
- In both cases of liver abscess >80% of patients have >150 cc volume of abscess.

Aspirate analysis in patients of liver abscess

Aspirates	Numbers Of Patients
ENTEROBACTER	4(2)
KLEBSIELLA	10(5)
E. COLI	12(6)
S. AUREUS	14(8.5)
ACINETOBACTER	4(2)
STREPTOCOCCUS	8(4)
PROTEUS	1(1)
NO GROWTH	87(43.5)
E.HISTOLYTICA	51(25.5)
MIXED	9(4.5)

Table 6

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- E. coli & S. aureus were most common organisms cultured in pyogenic abscess 8.5% & 6% respectively overall.
- E. histolytica was most common organisms cultured in amoebic abscess 25.5% over all.
- Proteus species was found only in 1 patient (0.5%).
- 43.5% of the aspirates showed no growth.

Complications of Liver Abscess

Complications	Pyogenic (N=143)	Amoebic (N=57)	Total (N=200)
Intraabdominal rupture and peritonitis	29 (20)	25 (44)	54 (27)
Pleural effusion with/without consolidation	43 (30)	13 (22)	56 (28)
ICTD insertion	16 (11)	5 (8)	21 (10.5)
Sub capsular rupture	7 (5)	3 (5)	10 (5)
Ascites	6 (4)	4 (7)	10 (5)
Splenomegaly/ splenic abscess	4 (3)	5 (8)	9 (4.5)
Other organ complication	2 (1)	2 (3)	4 (2)
Mortality	6 (4)	1 (1)	7 (3.5)

Table 7

- Intra-abdominal rupture with peritonitis was seen more common in amoebic >pyogenic liver abscess (44% >20%) of cases.
- Pleural effusion (Right/left or both, mild or moderate/gross) with or without lung consolidation was the most frequent complication found in 56/200 (28%) cases. ICTD insertion was required in 21/200(10.5%) cases.
- Death occurred in 7/200(3.5%) cases due to complications more common in pyogenic liver abscess (4%).

Treatment Modalities:

Treatment	Numbers Of Patients		Mean Days Of Hospital Stay	
	Pyogenic (N=143)	Amoebic (N=57)	Pyogenic	Amoebic
Antibiotic coverage (AC)	7(5.8)	3(5.2)	7	6
Aspiration + Antibiotics (PA +AC)	54(37.7)	43(75.43)	6.2	5.2
Laparotomy (LT)	23(16.08)	5 (8.77)	8.6	9
Pig Tail Catheterization (PC)	58(40.5)	6(10.52)	6.7	6
Pigtail + Aspiration (PC + PA)	1(0.07)	0(0)	10	9

Table 8

Antibiotic Coverage (AC), Percutaneous Aspiration (PA), Pig Tail Catheterization (PC), Laparotomy (LT)

- In cases of pyogenic abscess most common modality of treatment was pigtail catheterization (40.5%) followed by percutaneous aspiration with antibiotics coverage (37.7%).

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- In cases of amoebic abscess most common modality of treatment was percutaneous aspiration with antibiotics coverage (75.43%) followed by pigtail catheterization (10.52%).
- Laparotomy was required in 28/54 (14% of all patients) of ruptured liver abscess.
- In pyogenic abscess mean days of hospitalization were 6.7 & 6.2 using pigtail catheterization & percutaneous aspiration with antibiotics coverage respectively.
- In amoebic abscess mean days of hospitalization were 5.2 & 6 using percutaneous aspiration with antibiotics coverage & pigtail catheterization respectively.

DISCUSSION: Abscess of the liver has been described since the time of Hippocrates (400 BC), with the first published review by Bright appearing in 1936.²

India being a tropical country and home to 400 million people harboring *E. histolytica*, the causative organism of amoebic liver abscess; it assumes immense importance for thorough understanding of the same.

The rising incidence in alcoholics & immunocompromised individual has become a matter of grave concern as complications rate are high especially in this sub-group leading to increased morbidity and mortality.

Pyogenic abscess is more common in elderly population (50 & above) while amoebic abscess is more common in young population (30-50 yrs.), but it should be noted that no age is exempt from this disease & cases have been seen in infants less than 2 months to 93 years.^{11,12,13} In our study Age of the patients varied from 17-70 years with mean age of 36.5 years. The highest incidence was noted in pyogenic & amoebic liver abscess were 51-60 years (32%) and 31-40 years (37 %) respectively quite similar to previous studies (Shyam Mathur et al,¹⁴ Khee-Siang Chan et al.¹⁵ Hyo Min Yoo et al.¹⁶ Teh et al.¹⁷ Navneet Sharma et al.¹⁸ Viroj wiwanitkit.¹⁹)

Of all the studied patients, male predominance was seen in both types of liver abscess with over all male to female ration of 17:1. Mehta et al.¹² (1986) founded a male preponderance of 15:1 while study conducted by Tejas N Hathila et al.¹³ reported that male to female was 13.3:1.9. Similar results was also obtained in other studies done by Shyam Mathur et al.¹⁴ Khee-Siang Chan et al.¹⁵ Hyo Min Yoo et al.¹⁶ Teh et al.¹⁷

Most of the patients belong to lower & middle SES (99%) while only 2 cases reported in upper class (1%). Hai et al. reported higher incidence of liver abscess especially pyogenic in lower socioeconomic status. Similar results were also found in study of Zahid Khan et al.²⁰ & Islam et al.²¹ with 60% & 74% respectively association with lower SES status.

In our study both alcoholism as well diabetes were most influential predisposing factor in both pyogenic & amoebic liver abscess (73.7%) & (40.5%) respectively. Other important predisposing factors were biliary tract & gastrointestinal tract diseases and immunocompromised states. In the series of Islam et al 80% consumed alcohol while in the study of Shyam Mathur et al.¹⁴ 70% were alcoholic. This was supported by hypothesis of Seeto RK et al.⁹ (1999) who state that alcohol has role in impairing Kupfer cell function or both cellular & humoral immunity thus predisposing liver to infections.

In our series all patients were tested for HIV and HBsAG serology. Only 4% of cases were found to have Positive HBsAG (Equal in both types) while 5% of the patients found HIV positive (Pyogenic > amoebic).

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All of the patients (100%) who presented in this series presented with abdominal pain. Most of the patients had Right Hypochondriac pain; some shows Epigastrium and generalized abdominal pain. Fever was also more significant (82%) symptom in our study as compared to other studies done by Shyam Mathur.¹⁴, Khee-Siang Chan et al.¹⁵, Hyo Min Yoo et al.¹⁶, Teh et al.¹⁷, Navneet Sharma et al.¹⁸ Rehman et al.²², Querban Ali Bugti et al.²³, Reed et al.²⁴ (2001) studied liver abscess & found epigastric & right hypochondrium pain followed by nausea & vomiting as most common featuring. Diarrhea is predominant feature of pyogenic liver abscess (54%) in compared to amoebic type.

RUQ Tenderness (100.0%), Hepatomegaly (83.0%) were common presentation in our series and were comparable to the other studies except Jaundice (20.0%) was more common clinical presentation in the study done by Hyo Min Yoo et al.¹⁶ (7.0%).

Most common abnormality in lab investigations were ESR (97%) followed by prolonged PT (80.5%), anemia (75.2%), leukocytosis (65.5%) increased SGPT & SGOT (71% & 64%) and increased total serum Bilirubin (52.5%)

Alteration from normal level of Liver Enzymes (More common in pyogenic liver abscess) & Serum Albumin (More common in amoebic liver abscess) were differentiating featuring among pyogenic & amoebic liver abscess.

In our study hemoglobin level, blood sugar level and Hypoalbuminemia shows same consistency with the study of Hyo Min Yoo et al.¹⁶ study, but the liver profile study was shown more elevated level of alkaline phosphatase than SGOT and SGPT level and our study showed vice-versa. Present study showed 52.2 %patients had total serum bilirubin more than normal and prothrombin time (>14 sec) in 80.50%.

We had done ESR in all patients with Wintrobe's method and were found to be raised in 97% cases; it was comparable to the Shyam Mathur et al.¹⁴ study which stated ESR was raised in 2/3 of the cases. It can be compared to the CRP (inflammatory marker) level measured in the study of Khee-Siang Chan et al.¹⁵ which was found highly raised in all the patients in whom they had performed tests.

E.coli & S. aureus were most common organisms cultured in pyogenic abscess. 8.5% & 6% respectively overall as compared to the study of Hyo Min Yoo et al.¹⁶ where only E.coli accounts for 63.0%. Klebsiella was found common in culture findings in Khee-Siang Chan et al.¹⁵ (82.3%), Hyo Min Yoo et al.¹⁶ (28.0%) and it was next to the E.coli & S. aureus with 5% in our study. E. histolytica was most common organisms cultured in amoebic abscess 25.5% over all. Proteus species was found only in 1 patient (0.5%). 43.5% of the Cultures showed no growth.

In our present study Isolated right lobe abscess was the most common finding seen in out of 79.5% of cases, Left lobe abscess was seen in 17.50% of cases. Both lobe involvement was seen in 3% of cases which is as compared to other study of Khee-Siang Chan et al.¹⁵ (17.9%), Hyo Min Yoo et al.¹⁶ (20.0%), Navneet Sharma et al.¹⁸, Rehman Alvi et al.²², Rustam Khan et al.²⁵ (23.7%), AH Mohsen et al.²⁶ Afzal Anees et al.²⁷

Solitary abscess being the most common presentation found in 80.5% cases. Multiple lobe liver abscesses were seen in 5.5% cases. In study of Bugti et al.²³ more than 80% of cases have solitary liver abscess. Applying multiple regression analysis solitary liver abscesses was found more associated with amoebic etiology while multiple liver abscesses were associated with pyogenic abscess. (P=0.004). Ruptured liver abscess more common in pyogenic > amoebic (19.58% vs. 9.3%).

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In both types of liver abscess >80% of patients have >150cc volume of abscess. In our study volume of abscess was directly proportional to level of serum alkaline phosphatase (P=0.002) & inversely to haemoglobin (P=0.005) which is comparable to study done by Ghosh S et al.^{28,29}

In our study intra-abdominal rupture with peritonitis was most common complication (27%) followed by Pleural effusion with or without lung consolidation (28%) of cases. Study done by Tejas N Hathila et al.¹³ reported peritonitis (55%) & pleural effusion (32%) which is similar to our study. Study done by Hyo Min Yoo et al.¹⁶ shown peritonitis in 7.0% of cases which was significant lower than our series while other complications were of almost same. ICTD insertion was required in (10.5%) cases out of 28% of pleural complications.

Death occurred in 7/200(3.5%) cases due to complications in pyogenic liver abscess (4%). Mortality rates in literature were 11% in Hyo Min Yoo et al.¹⁶ 5% in Navneet Sharma et al.¹⁸ 10% in Zahid Khan et al.²⁰ & 4.7% in Qurban Ali Bugti et al.²³ Higher mortality rates were associated more with pyogenic liver abscess that too with multiple liver abscess. (P=0.003).

Controversies in the management of liver abscess still exist. Interventional drainage of liver abscess has been an accepted therapy for decades. The diagnosis and treatment of liver abscess has changed due to advances in imaging techniques. Most common modality of treatment was pigtail catheterization (40.5%) & percutaneous aspiration with antibiotics coverage (37.7%) in pyogenic & amoebic liver abscess respectively as compared to Hyo Min Yoo et al.¹⁶ Study where 79.0% patients underwent Percutaneous Aspiration & 42.6% cases underwent Pigtail catheter drainage. Yu et al.³⁰ reported percutaneous needle aspiration was as effective as continuous percutaneous catheter drainage.

Laparotomy was required in 14% of liver abscess as compared to Hyo Min Yoo et al.¹⁶ study where 21.0% patients underwent surgical intervention as laparotomy. Mohammad Aslam et al.²³ performed surgical intervention in 7.14% of cases which was slightly lower than our study.

Mean days of hospitalization were in pyogenic & amoebic liver abscess 7.7 & 7.04 respectively with least days seen in those patients who undergone percutaneous aspiration with antibiotics in both types of liver abscess as compared to 8.24 reported by Tejas N Hathila et al.¹³

CONCLUSION: Pyogenic & Amoebic liver abscess is most common in 5th & 4th decade of life with male to female ratio of 17:1. Alcohol consumption, Diabetes Mellitus & low socio economic status are important predisposing factors. Most common presenting complains & clinical finding is abdominal pain & RUQ tenderness respectively with intra peritoneal rupture is most common complication. On ultrasound most abscess are solitary, in right lobe of liver & having greater than 150 cc of volume. E. coli is commonest among pyogenic while E. histolytica is common in amoebic liver abscess, earlier respond better with pigtail drainage while later with percutaneous aspiration with antibiotics.

Limitation:

1. Data regarding treatment before visiting our hospital were not available.
2. Serological tests for E. Histolytica were not done due to lack of facilities.

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