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Original Research Paper

General Surgery

ALCOHOL-A PREDISPOSING FACTOR FOR LIVER ABSCESS IN SOUTHERN PART OF ODISHA

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ABSTRACT

BACKGROUND: Liver abscess is a constant source of mortality and morbidity in general and tropical countries. Aim of my study was to know the most common etiology associated with liver abscess in southern part of Odisha.

METHOD: Study was carried out in department of general surgery, MKCG Medical College and Hospital, Berhampur . All the patients (male and female) admitted with liver abscess from august 2017 to march 2019 were taken up for study.

RESULT: From our study the disease usually affects the males in the age group 25- 55 yr and alcohol intake is found to be the chief predisposing factor. People consuming locally prepared Alcohol are most vulnerable for both pyogenic liver abscess and amoebic liver abscess and are almost equally associated with intake of alcohol.

CONCLUSION: From the study it is proved that intake of alcohol plays a major role as predisposing factor for the formation of liver abscess i.e. both amoebic as well as pyogenic.

KEYWORDS : Liver abscess, alcohol

INTRODUCTION

- The first description of a hepatic abscess is credited to Hippocrates in the year 4000 B.C.[1]
- An associated between liver disease and heavy alcohol consumption was recognized more than 200yrs.[2]
- The liver is particularly susceptible to alcohol related injury because it is the primary site of alcohol metabolism.
- As alcohol is broken down in the liver a number of potentially dangerous by products are generated such as acetaldehyde and highly reactive molecules called free radicals which damage liver.
- Epidemiological studies suggest that a threshold dose of alcohol must be conjumed for serious liver injury to became apparent.[3]

METHOD

A prospective study was done in department of general surgery of M.K.C.G. Medical college and hospital, Berhampur. 60 cases are being studied who were admitted to general surgery department with liver abscess from southern odisha from Aug 2017 to mar 2019.

Pts were selected based on following diagnostic criteria.

DIAGNOSTIC CRITERIA

Liver abscess is diagnosed based on

1. Tender enlarged liver.
2. Suggestive radiological findings.
3. Suggestive hematological findings.
4. USG abdomen showing abscess cavity.

Patients were classified into alcoholics and non alcoholics according to the history and again they are classified into complicated and uncomplicated liver abscess.

- **Uncomplicated liver abscess :-** Abscess confined to the liver
- **Complicated liver abscess: -** If liver abscess ruptured into other viscera or into the peritoneal cavity / pleural cavity.

In patients with alcoholic history, they are thoroughly enquired about the duration of the habit, frequency, amount of alcohol consumed and brand.

A detailed clinical examination of all the systems including the symptoms is recorded.

Pleura pulmonary complication were suspected, when the patients presented with pleuritic pain in RT lower chest, referred pain to right shoulder, non-productive cough, and rarely haemoptysis.

Peritoneal complications were suspected when patients had abdominal pain, fever, tender abdomen, dullness with associated signs and symptoms of liver abscess.

Blood investigation

CBC
LFT with Total protein Albumin.
SERUM :- Urea and Creatinine.
PT, INR
HbsAg, ICTC, HCV
Aspirate for culture and sensitivity

Radiology

Most of the cases were confirmed by ultrasound. X-ray abdomen (erect position) , Chest X-ray PA view and lateral view was taken particularly when a rupture of the liver abscess into the pleural cases respected.

RESULT

60 cases of liver abscesses were studied out of which 58 were alcoholic of these 58 people, 50 people had the habit of taking every day.

In total cases uncomplicated cases are 54 and complicated

cases are 6. Among uncomplicated cases 52 patients are alcoholics and 2 are non alcoholics. Among complicated cases all 6 are alcoholics.

Out of 60 patients 59 were male and 1 is female.

Table no-1(Age-uncomplicated liver abscess)			
Age(yrs)	No. of patients	Alcoholics	Nonalcoholics
25 – 35 yrs	10	09	01
36 - 45 yrs	30	30	00
46 – 55 yrs	14	13	01

Most common age for uncomplicated liver abscess is 36 to 45 years.

Table no-2(sex- uncomplicated liver abscess)			
Sex	No of patients	Alcoholics	Non alcoholics
M	53	52	01
F	01	00	01

Male is the most common sex affected

Table no-3(Economic status – uncomplicated liver abscess)			
Status	No of patient	Alcoholics	Non alcoholics
Poor	52	50	02
Middle class	02	02	00

Most patients belong to a poor or low socioeconomic status.

Table no – 4 (Alcoholic – uncomplicated liver abscess)

Alcoholic → Male → No of patients 52 out of 54

Table no – 5(symptoms – uncomplicated liver abscess)				
	SYMPTOMS	No.of Patients	Alcoholics	Nonalcoholics
1	Fever	54	54	00
2	Loss of appetite	56	48	02
3	Loss of weight	10	10	00
4	Right Hypochondriac or epigastrium pain	54	52	02
5	Character – dull aching	54	52	02
6	Nausea	20	19	01
7	Vomiting	05	05	00
8	Diarrhea	05	05	00
9	Dysentery	04	04	00
10	Cough	02	02	00
11	Breathlessness	02	02	00

Most common symptoms found to be loss of appetite, dull aching type of abdominal pain and fever.

Table no – 6 (signs – uncomplicated liver abscess)				
		No of patient	Alcoholics	Non alcoholics
1	Hepatomegaly	40	38	02
2	Pallor	30	30	00
3	Hepatic tenderness	45	44	01
4	Lung findings	03	03	00
5	Jaundice	01	01	00

Hepatomegaly and hepatic tenderness along with presence of pallor are the common symptoms found.

Complicated liver abscess

No. of patients – 06

Table no – 7 :Types of complications(complicated liver abscess)		
	No. of patients	Percentage(%)
Peritoneal	04	66.66
Pulmonary	01	16.66
Pleuroperitoneal	01	16.66

Table no- 8 :Alcoholics – complicated liver abscess		
Alcoholics	No. of patients	Percentage
M	06	100%
F	00	Nil

Table no - 9 :Treatment of all the cases.		
Mode of treatment	Alcoholics	Non alcoholics
Medical management	08	01
Ultrasound guided aspiration	10	
Pig tail catheter insertion	34	01
Exploratory laparotomy	06	

Majority of the patients are treated with ultrasound guided pigtail catheter drainage of the abscess. Most of the non alcoholics responded well to medical management where as most of the alcoholics required some form invasive procedures such as aspiration or pigtail catheterization under usg guidance.

In our study 6 cases with peritoneal / pulmonary complications arising out of ruptured liver abscess were managed surgically with exploratory laparotomy done with external tube drainage. One patient died in ICU in day 4 due to associated respiratory complications (COPD), but rest 5 patients recovered successfully and discharged.

Figure 01:- Patient after usg guided aspiration and pigtail catheterization

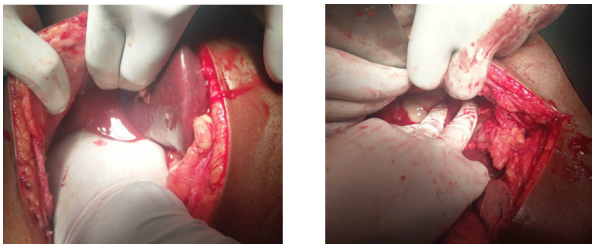

Figure 02:- Complicated liver abscesses with rupture to peritoneal space.

DISCUSSION

In this study 60 patients diagnosed as liver abscess (amoebic and pyogenic) are included. All patients are enquired about their intake of alcohol, amount of intake, duration of the habit, frequency of consuming and quality of alcohol consumed are also enquired.All the above mentioned investigations were done to all the patients.

Results of this study shows that among those who developed liver abscess 58 were alcoholics. Out of those 58 patients 50 people had the habit of frequently intake of locally prepared alcohol every day.

In this period of study only 1 female patient was found and among 60 patients 6 patients developed complications such as rupture of the liver abscess into peritoneal and pleura cavity. All the 6 patients who developed complications were

chronic alcoholics. Among the uncomplicated cases, 90% are alcoholics. So from the above study, it was found that 90% of uncomplicated cases and 100% of complicated cases had history of alcohol intake.

The duration of symptoms are also found to be long in alcoholics when compared to non alcoholics. It is also seen that large sized liver abscess are seen mostly in the alcoholics.

The symptoms like fever loss of weight vomiting are seen only in alcoholics and symptoms like loss of appetite, abdominal pain nausea diarrhea are also common in them.

So from this, history of alcohol intake is found to be most important predisposing factor for causation of liver abscess comparing to any other predisposing factors.

In a study concluded by islam et all in rajshahi reveals 80% cases with pyogenic liver abscess consume alcohol and among them 95% patients had the habit of taking locally prepared alcohol. (TARI)[4].

In a study conducted kini and mammi on the patients with liver abscess, history of alcoholism was found in 20-30% cases[5].

In another study done over liver abscess,Joshi et al found a higher mortality rate in those consuming large quantity of alcohol[6].

In a study conducted on liver abscess by Ananthakrishnan Ramani et al revealed that 64% of patients had the habit of consuming alcohol[7].

In a study conducted by ravinder Ps. Makkar et all it found that the higher incidence of ALA in alcoholic livers is possible by due to their higher iron content[8].

A study conducted by C Stalin raja and P. Karthik also showed 94% of uncomplicated cases and all complicated cases had history of alcohol intake[9].

CONCLUSION

So from this study again it is suggested that higher incidence of liver abscess is seen in the alcoholics when comparing with non alcoholics. Majority of cases are affected due to intake of locally prepared beverages by lower economic status people. So alcohol intake must be discouraged to prevent mortality and morbidity due to liver abscess.

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