Study of clinical profile of alcoholic hepatitis : A Case series of 100 cases

Dr Sumit Kumar Bochiwal[1], Dr. Vishakha Vinod[2§], Dr. Chetan Maniya[3], Dr. Deepak Shukla[4]

[1,2,3]Resident Doctor, Department of Medicine, SMIMER, Surat (Gujrat) India
[4]Associate Professor, Department of Medicine, SMIMER, Surat (Gujrat) India
[§]Corresponding author's Email: drsmitapt@gmail.com

Abstract— *Alcohol consumption is associated with a wide range of adverse health and social consequences. Alcoholic Hepatitis is one of the consequence of alcoholism. So an observational study was designed over the period of one year to study clinical profile and effects of Alcoholic Hepatitis. The study was carried out in 100 consecutive patients admitted to tertiary care hospital with alcoholic hepatitis. Data entry and analysis was done in Microsoft excel through Descriptive statistic and chi-square tests. It was observed that most patients with Alcoholic Hepatitis drinks more than 100 g/d with 150-200 g per day being common. In the present study 92% of patients were heavy alcoholics i.e. more than 80gm/day. This suggests that alcoholic hepatitis mostly occurs in heavy drinkers. Present study suggests that Discriminate Factor score does not associate with complications like hepatic encephalopathy and ascites. SGOT, SGPT, serum bilirubin, prothrombin time and serum albumin didn't associate well with amount of alcohol intake. This study also observed that patient with Glasgow Alcoholic Hepatitis Score of more than 9 have more chance of complications like hepatic encephalopathy and ascites. It can be concluded from this study that most of the alcoholic hepatitis patients were young adults and middle age population, who were is active and productive mass of society. Early detection of alcoholic liver disease can decrease both morbidity and mortality due to alcoholic liver disease.*

Keywords: Alcohol consumption, Alcoholic Hepatitis, Discriminate Factor, Liver Function Test.

I. INTRODUCTION

Alcohol consumption is associated with a wide range of adverse health and social consequences, both acute (e.g., traffic deaths, other injuries) and chronic (e.g., alcohol dependence, liver damage, stroke, cancers of the mouth and oesophagus). Research to date has suggested that alcoholism may or may not be progressive in nature.[1] Some people develop the symptoms of alcoholism after only months of heavy drinking, whereas other alcoholics may drink heavily for years before developing the disease.[2]

Alcohol problems, both those of individuals and those that affect society at large, continue to impose staggering social and economic burdens. In addition to negatively affecting health, a wide range of social ills including domestic violence, child abuse, fires and other accidents and other crimes against individuals such as rape, robbery and assault have all been linked to alcohol misuse.[3] An estimated 20 to 40 percent of patients in large urban hospitals are there because of this illnesses that have been caused or made worse by their drinking.[4]

The threshold for developing alcoholic liver disease in men is an intake of >80gm g/d of alcohol for 10 years, while women are at increased risk for developing similar degrees of liver injury by consuming 20–40 g/dl.[5]

Alcoholic liver disease (ALD) describes a spectrum of conditions ranging from reversible fatty liver to alcoholic hepatitis (AH), cirrhosis, and hepatocellular carcinoma (HCC).[6]

This study was conducted with the aim to study the clinical picture of alcoholic hepatitis and its discriminate factor as a predictor of outcome.

II. METHODOLOGY

This hospital based prospective observation study was conducted on 100 consecutive patients with alcoholic hepatitis admitted during Jan 2016 to Nov 2016 to tertiary care hospital in Surat (Gujrat) India. This study was aimed to study the clinical picture of alcoholic hepatitis and its discriminate factor as a predictor of outcome.

For the study purpose, Alcoholic patients with sign and symptoms suggestive of Alcoholic hepatitis with ASR increased two- to sevenfold but greater than ALT and ALT increased two- to sevenfold will be taken. Out of these age less than 18 were excluded. Finally 100 cases were selected for study. Discriminate factor score was calculated of each selected subject.

All the selected cases were interviewed, examined and evaluated. All routine investigations like CBC, LFT, RFT, PT, INR, APTT, USG abdomen were done. Special investigations like IgM HEV, IgM HAV, HBsAg, HCV, HIV, etc. were done in selected patients to rule out other causes of hepatitis..

Statistical Analysis: Data entry and analysis was done in Microsoft excel through Descriptive statistic. To infer the association Chi-square test was used. P value less than 0.05 was considered as significant.

III. RESULTS

The present study was carried out on 100 patients of alcoholic hepatitis admitted to medical wards in tertiary care hospital, Surat during Jan 2016 to Nov 2016. In this study maximum number of patients (39%) were in the age group of 40-49 years followed by in the age group of 30-39 years, 20-29 years, 50-59 years, 60-69 years and 70-79 years. The youngest patient was 20 years old and oldest patients was 70 years old. (Figure 1)

Figure 1

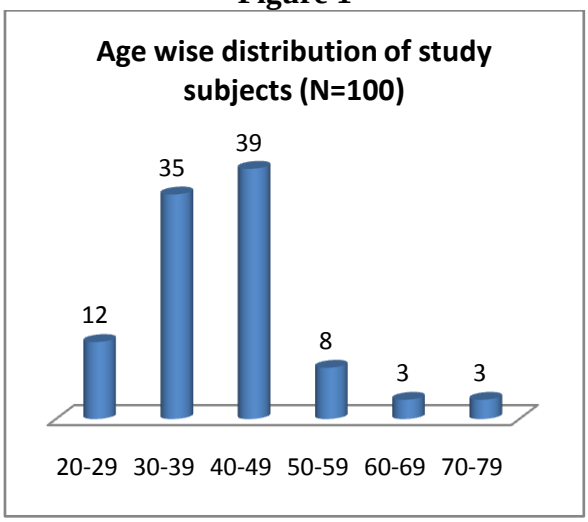
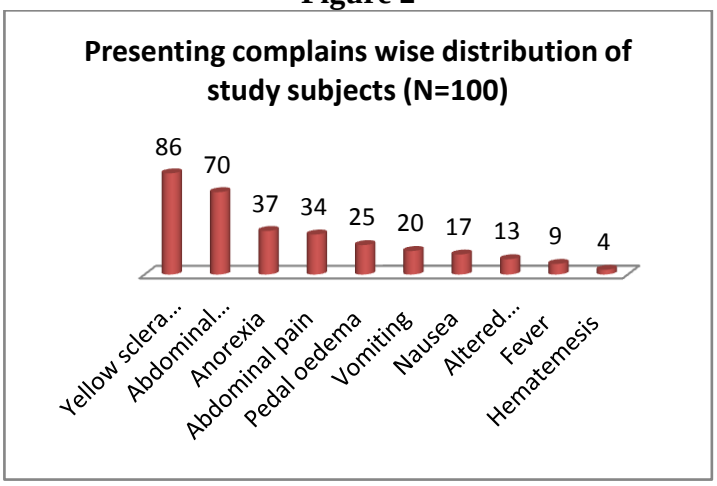


Figure 2



In present study most common presenting symptom was yellowish discoloration of sclera and urine in 86% of the patients. This was followed by abdominal distention in 70% of the patients, anorexia in 37%

of the patients, abdominal pain in 34% of the patients, pedal oedema in 25% of the patients, vomiting in 20% of the patients, nausea in 17% of the patients, altered sensorium in 13% of the patients, fever in 9% of the patients and hematemesis in 4% of the patients. (Figure 2)

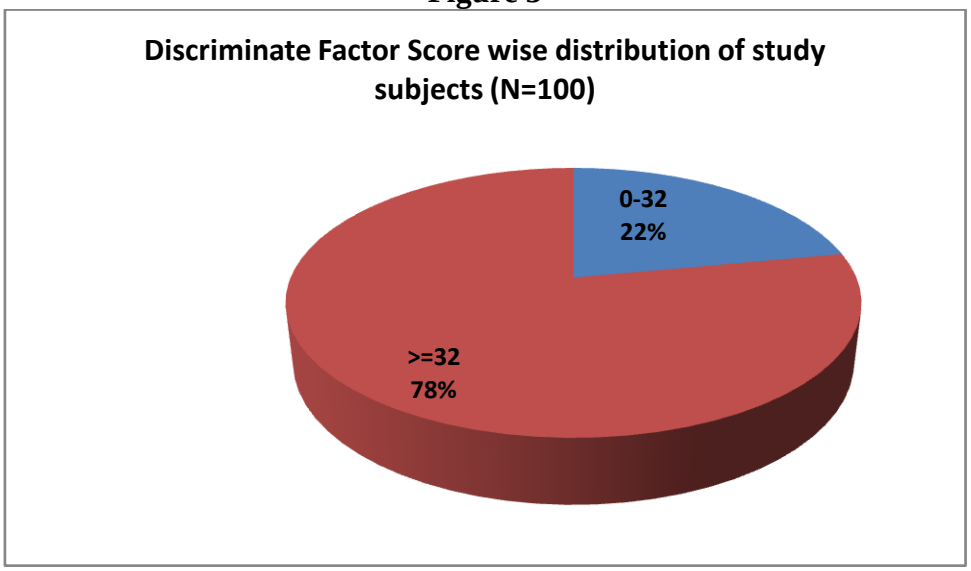
In the present study maximum number of patients (92%) had consumed alcohol more than 80 gm/day, while patients who had 80 gm/day or less were only 8%. Most patients with Alcoholic Hepatitis drinks more than 100 g/d with 150-200 g per day. In present study 46% of the patients had consumed alcohol for 11-20 years of duration while 40% of the patients had consumed for less than 10 years and 14% of the patients had consumed for more than 20 years of duration. (Table 1)

Table 1
Variable related to Alcoholism wise distribution of study subjects

S. No.	Variables		Number and percent
1	Amount of alcohol (ml/Day)	Up to 80	8
		>80	92
2	Duration of alcohol Consumption (in Years)	<6	5
		6-10	35
		11-15	28
		16-20	18
		>20	14

In the present study 78% of the patients had discriminate factor 32 and above, while 22% of the patients had discriminate factor below 32. (Figure 3)

Figure 3



In this study there was not much difference in studied biochemical parameters i.e. SGOT, SGPT, S. Bilirubin, PT and Serum albumin in heavy drinkers and light drinkers. So studied biochemical parameters are not affected with amount of alcohol intake. (Table 2)

Table 2
Association of Amount of alcohol consumed and Biochemical Parameters

Amount	Patients	Sgot	Sgpt	S.Bill	Pt	S.Albumin
Up to 80gm/day	8	169.23	61.73	8.84	28.69	2.5
>80gm/day	92	171.25	62	9.17	28.82	2.5

In this study 68% of the patients had Glasgow Alcoholic Hepatitis Score less than 9 and 32% of the patients had Glasgow Alcoholic Hepatitis Score 9 or more. (Table 3)

Hepatic encephalopathy was found significantly more ($p<0.05$) in patients in whom score was 9 or more than whose score was less than 9 (21.87% v/s 8.8%). (Table 3)

Ascites was seen in 41.17% of the patients in whom score was less than 9 and 50% of the patients in whom score was 9 or more this difference in proportion was not found significant. (Table 3)

Table 3
Association of Glasgow Alcoholic Hepatic Score with Encephalopathy and Ascites

Glasgow Alcoholic Hepatitis Score	No. Of Patients (%)	Encephalopathy Present	Ascites Present
<9	68	6 (8.8%)	28(41.17%)
9 and above	32	7(21.87%)	16(50%)
P-value by Chi-squire Test	**LS**	0.045 **S**	0.209 NS

When association of Discriminate factor score with Encephalopathy and Acitis was analysed it was observed that Hepatic encephalopathy was seen in 13.63% of the patients in whom score was less than 32 and 12.82% of the patients in whom score 32 or more which was statistically non-significant (P-value =0.4456 ,CI 95%). (Table 4)

Ascites was seen in 36.36% of the patients in whom score was less than 32 and 46.15% of the patients in whom score was more than 32 which was statistically non-significant.(P-value = 0.2145, CI 95%). (Table 4)

Table 4
Association of Glasgow Alcoholic Hepatic Score with Encephalopathy and Ascites

Discriminate Factor Score	No. Of Patients (%)	Encephalopathy Present	Ascites Present
<32	22	3(13.63%)	8(36.36%)
32 and above	78	10(12.82%)	36(46.15%)
P-value by Chi-squire Test	**LS**	0.446 NS	0.215 NS

IV. DISCUSSION

In the present study the alcoholic liver disease was found maximum in 4^{th} and 5^{th} decade. These results were comparable with study conducted by Sarkar et al[7] where maximum number of patients were in the age group 30-49 years. In a Study conducted by Hemang Suthar et al average age was 41 years with maximum cases (58 %) belonged to age group 40-49 years.[8] While in Chacko[9] and Chacko et al[10] study and Sarin et al study average age of patients were 48 ± 11 years and 43 ± 8.7 years respectively. These studies indicate that alcoholic hepatitis is more common in 30 to 50 years of age. The typical age of presentation of Alcoholic Hepatitis is between 40 to 50 years, with the majority occurring before the age of 60 years [8]. Present study too indicates the same findings.

In present study most common presenting symptom was yellowish discoloration of sclera and urine in 86% of the patients. This was followed by abdominal distention in 70% of the patients, anorexia in 37% of the patients, abdominal pain in 34% of the patients, pedal oedema in 25% of the patients, vomiting in 20% of the patients, nausea in 17% of the patients, altered sensorium in 13% of the patients, fever in 9% of the patients and hematemesis in 4% of the patients.

Study conducted by Hemang Suthar et al[8] had 60% of the patients with jaundice and 60% of the patients with abdominal distension. Study conducted by Chavan VB et al[11] had 88% of the patients with jaundice and 64% of the patients with abdominal distension. Study conducted by Om K. Pathak et al[12] had 57.5% of the patients with jaundice while 45.3% of the patients with abdominal distension.

In the present study 92% of patients were heavy alcoholics i.e. more than 80gm/day. This suggest that alcoholic hepatitis mostly occurs in heavy drinkers. And 46% of the patients had consumed alcohol for 11-20 years of duration while 40% of the patients had consumed for less than 10 years and 14% of the patients had consumed for more than 20 years of duration.

In study conducted by Nitya Nand et al[13] had average 17 years duration of alcohol intake in alcoholic hepatitis patients. In study by Satyanarayan Ray et al[14] patients had average13.8 ± 4.4 years of alcohol intake, while in present study mean duration of alcohol intake was 14.8 years.

In this study in alcoholic hepatitis change in SGOT, SGPT, serum bilirubin, prothrombin time and s. albumin didn't associate with amount of alcohol intake.

Hepatic encephalopathy was found significantly more ($p<0.05$) in patients in whom Glasgow Alcoholic Hepatitis Score was 9 or more than whose score was less than 9 (21.87% v/s 8.8%)

This study suggests that Discriminant Factor score does not associate with complications like hepatic encephalopathy and ascites.

V. CONCLUSION

Present study concludes that the most of the alcoholic hepatitis patients were young adults and middle age population, which is active and productive mass of society. High morbidity of alcoholic liver disease required frequent hospitalization adding to burden for health care system and loss of man-hours at work. Mortality and morbidity associated with this disease is matter of serious economic loss to the nation and grief for the society. So it is recommended for screening for alcohol abuse in all adult patients presenting to the hospital and providing counseling services to increase the awareness of ill effects of alcohol. Early detection of alcoholic liver disease can decrease both morbidity and mortality due to alcoholic liver disease.

CONFLICT OF INTEREST

None declared till now.

REFERENCES

[1] Purohit V, Russo D. Cellular and molecular mechanisms of alcoholic hepatitis: introduction and summary of the symposium. Alcohol. 2002;27:3–6.

[2] Maddrey WC, Boitnott JK, Bedine MS, Weber FL, Mezey E, White RI. Corticosteroid therapy of alcoholic hepatitis. Gastroenterology. 1978;75:193–199.

[3] O'Shea RS, Dasarathy S, McCullough AJ. Alcoholic liver disease. Hepatology. 2010;51:307–328. [

[4] Chick J, Erickson CK. Conference summary: Consensus Conference on Alcohol Dependence and the Role of Pharmacotherapy in its Treatment. Alcohol ClinExp Res 1996;20:391–402.

[5] Kitchens JM. Does this patient have an alcohol problem? JAMA 1994;272:1782–7.

[6] Lelbach WK. Cirrhosis in the alcoholic and the relation to the volume of alcohol abuse. Ann. NY Acad. Sci. 1975; 252: 85.

[7] Aditya Prasad Sarkar, Subrata Sen, Sudhakar Mondal, Om Prakash Singh, Amitava Chakraborty, Bikash Swaika. A study on socio-demographic characteristics of alcoholics attending the de-addiction center at Burdwan medical college and hospital in West Bengal. Indian Journal of Public Health.2013; 57(1):33-35

[8] Hemang Suthar, Kaushal Suthar, Bhavna Mewada. Clinical profile of cases of alcoholic liver disease. Int J Med Sci Public Health. 2013;2(2):394-398

[9] Chacko RT, Chacko A. Serum and muscle magnesium in Indians with cirrhosis of liver. Indian Journal of medical Research 1997;106:469- 474.

[10] Sarin SK, Dhingra N, Bansal A, Malhotra S, Guptan RC. Dietary and nutritional abnormalities in alcoholic liver disease: a comparison with chronic alcoholics without liver disease. Am J Gastroenterol 1997;92(5):777-783.

[11] V. B. Chavan, G. G. Harshe, Scholars Journal of Applied Medical Sciences (SJAMS) ISSN 2320-6691 (Online)Sch. J. App. Med. Sci., 2016; 4(5A):1506-1509

[12] Pathak OK, Paudel R, Panta OB, Giri BR, Adhikari B. Retrospective study of clinical profile and prognostic indicators in patients of alcoholic liver disease admitted to a tertiary care teaching hospital in western Nepal. Saudi J Gastroenterology 2009;15(3):172-175

[13] Nitya Nand, ParveenMalhotra, Dipesh Kumar Dhoot, Journal of The Association of Physicians of India, Vol. 63, June 2015

[14] Sayantan Ray, DibbendhuKhanra, Nikhil Sonthalia, Supratip Kundu, Kaushik Biswas, Arunansu Talukdar, Manjari Saha, and Himel Bera, J Clin Diagn Res. 2014 Oct; 8(10): MC01–MC05.Published online 2014 Oct 20. doi: 10.7860/JCDR/2014/8763.4968.