

## A PILOT STUDY ON CLINICAL PROFILE AND TREATMENT PATTERN OF ALCOHOLIC LIVER DISEASE PATIENTS AT A TERTIARY CARE TEACHING HOSPITAL

Kodandaraman Thoti\*<sup>1</sup>, Hari Keerthana T.<sup>1</sup>, Jagadeesh K.<sup>1</sup>, Madhavi V.<sup>1</sup> and Lakshmi P.<sup>2</sup>

<sup>1</sup>Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy, Tiruchanoor, Tirupati - 517503, India.

<sup>2</sup>Assistant Professor, Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy, Tiruchanoor, Tirupati - 517503, India.

\*Corresponding Author: Kodandaraman Thoti

Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy, Tiruchanoor, Tirupati - 517503, India.

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### ABSTRACT

The liver is one of the largest and most important organ for the well-functioning of other organs, because it performs multiple functions such as production of proteins and enzymes, detoxification, metabolic functions, and the regulation of cholesterol and blood clotting. The liver is primarily responsible for alcohol metabolism; it is especially vulnerable to alcohol related injury which alters the normal homeostasis of the liver. Liver disease is of course only one aspect of the health burden caused by alcohol abuse. Although alcoholism is associated with causation of multiple diseases, alcoholic liver disease (ALD) is the most common cause of mortality. The diagnosis of ALD is based on drinking history, physical signs and symptoms, and laboratory tests. ALD is a complex disease, the successful management of which hinges on the integration of all the competences in public health, epidemiology, addiction behavior and alcohol induced organ injury. Treatment strategies include life style changes to reduce alcohol consumption, cigarette smoking and obesity; nutrition therapy; and pharmacological therapy. Rational drug prescribing can be defined as appropriate drugs prescribed in the right dose, at correct time intervals and for a sufficient duration. Prescribers should be aware of the way in which drug response can be affected in patients with liver disease, in order to ensure safe and effective therapy. This study was carried out to evaluate comorbidities, complications and treatment pattern in general medicine department to improve awareness among physicians and society.

**KEYWORDS:** Alcoholic liver disease, Comorbidities, Complications, Treatment Pattern.

### INTRODUCTION

Alcoholic liver disease is a major health problem across the country at all levels of healthcare systems. Its complications are major causes of mortality and morbidity worldwide.<sup>[1]</sup> Alcohol consumption is well entrenched in the social fabric of many adult populations, virtually constituted a behavioral norm.<sup>[1]</sup> It is legal, readily available and cheap. Alcohol remains the third most common preventable cause of death after smoking and hypertension. Alcohol-related mortality affects young and middle aged population with loss of productive years.<sup>[10]</sup> Alcoholism results in an estimated 2.5 million deaths annually representing 4% of all mortality. It is the leading risk factor for mortality for ages 20-60 in males, and the eighth leading risk factor associated with more than 60 diseases.<sup>[2]</sup>

Each unit contains 8 gm of ethanol and variable in various common beverages. Risk depends on amount and

frequency and safe limit for alcohol consumption remains controversial.<sup>[3]</sup> Clinical features include nausea, vomiting, diarrhoea, abdominal pain or discomfort, pyrexia, ascites, jaundice and encephalopathy.<sup>[4]</sup> Proper diagnosis and management of the complications of ALD are vital to decreasing the deterioration of illness, improving quality of life, and possibly decreasing mortality. The cornerstone to the management of ALD is long-term abstinence.

Alcohol dependency should ideally be managed in concert with addiction services to ensure appropriate intervention and community follow up.<sup>[5]</sup> Others include support groups, vitamins, nutrition supplements, corticosteroids, and standard treatment for decompensation features such as ascites, varices, renal failure, hepatic encephalopathy and coagulopathy.<sup>[9]</sup> An important aspect of public health policy concerning alcohol has been the attempt to establish a safe threshold for consumption. More broadly, there is increasing

recognition of the heavy social, health and economic burdens imposed by heavy alcohol drinking and the policies to reduce harm caused by alcohol, need to be urgently implemented.<sup>[7]</sup>

Identification of prescribing pattern enabled us to determine the most used drugs in alcoholic liver disease; which helps to identify the better treatment regimen for treatment. The purpose of study was to identify the clinical profile and prescribing pattern associated with alcoholic liver disease and thus to decrease the circumstances and minimize the risk to develop complications.<sup>[6]</sup> Prescribers should be aware of the way in which drug response can be affected in patients with liver disease, in order to ensure safe and effective therapy. This study was carried out to evaluate comorbidities, duration of consumption of alcohol, complications and treatment pattern in general medicine department to improve awareness among physicians and society.

## METHODOLOGY

This cross sectional study was conducted in General medicine department at a 1000 bedded multispecialty institution, SVRRGG hospital, by taking ethical committee approval from Sri Padmavathi School Of Pharmacy. The study was conducted between November to December 2016. The sample size was 50 patients. Data was collected from male patients with their willingness. Inclusion criteria were those who are diagnosed to have alcoholic liver disease and patients with certain complications. Patients whose data was not available, who were not available at the bed side and those with multi organ involvement were excluded from the study. The data was collected using specially designed proforma including demographic details like age, gender, religion, occupation, disease details, duration of alcohol, past medical and medication history and drug chart. The comorbidities, complications and treatment pattern were analyzed based on the admitting diagnosis, past medical, medication history and drug chart. The demographic details, comorbidities, complications and treatment pattern were obtained from the case sheets and evaluated.

## RESULTS AND DISCUSSION

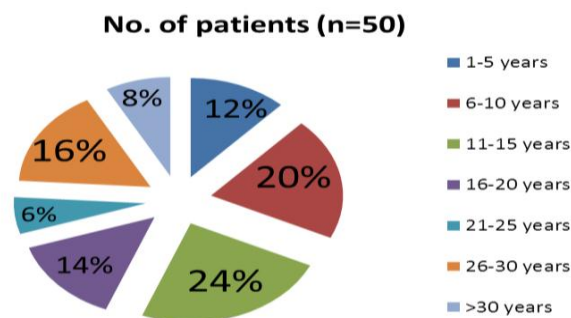
**Table 1: Age Wise Distribution.**

Age (years)	No. of Patients (50)	Percentage (%)
18-30	5	10%
31-40	15	30%
41-50	12	24%
51-60	10	20%
61-70	6	12%
>70	2	4%
Total	50	100

This table depicts that most of the people with alcoholic liver disease were belong to age group of 31-40 years – 15 people (30%), followed by 41-50 years of age – 12 people (24%), 51-60 years of age – 10 people (20%), 61-70 years of age – 6 people (12%), 18-30 years of age – 5 people (10%) and >70 years of age – 2 people (4%), this is because of their personal habits like smoking and alcoholism, altered life style, poor dietary habits and comorbidities associated which can exacerbate the existing medical condition leading to alcoholic liver diseases. All were male patients.

A number of risk factors that influence the risk of development and progression of liver disease have been identified. The amount of alcohol ingested is the most important risk factor for the development of Alcoholic liver disease. The relationship between quantity of alcohol ingested and the development of liver disease is not clearly linear. However, a significant relation exists between per capita consumption and the prevalence of alcoholic liver disease.

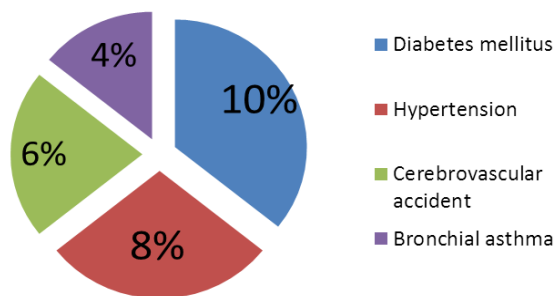
Alcohol consumption for a period of 11-15 years 12 people were highly affected with ALD (24%) followed by 6-10 years 10 people (20%), 26-30 years 8 people (16%), 16-20 years 7 people (14%), 1-5 years 6 people (12%) and >30 years 4 people (8%).



**Figure 1: Duration of Consumption of Alcohol.**

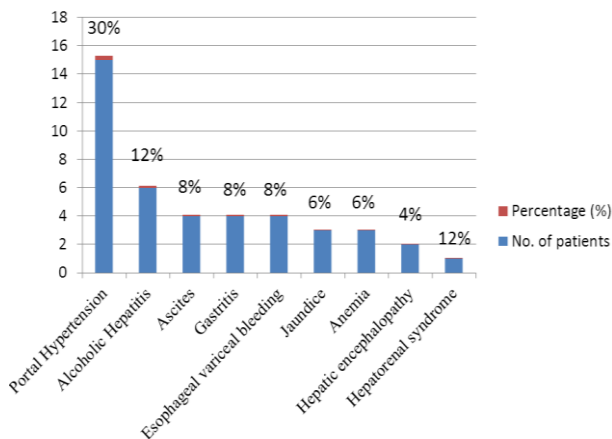
These findings show that duration of alcohol consumption does not affects the progression of liver disease, where quantity of alcohol intake may cause the severity of liver disease. Due to some limitations, the data of quantity of alcohol intake were not included in this study. By this reason, we cannot able to provide the accurate explanation for above result. ALD – ( Alcoholic Liver Disease ).

In this study, the major co-morbidity in ALD patients was Diabetes mellitus (10%) 5 people, followed by Hypertension (8%) 4 people, CVA (6%) 3 people and Bronchial asthma (4%) 2 people, which already existed in the patients prior to ALD diagnosis. As alcohol consumption is the main etiological factor for Diabetes Mellitus and Hypertension.



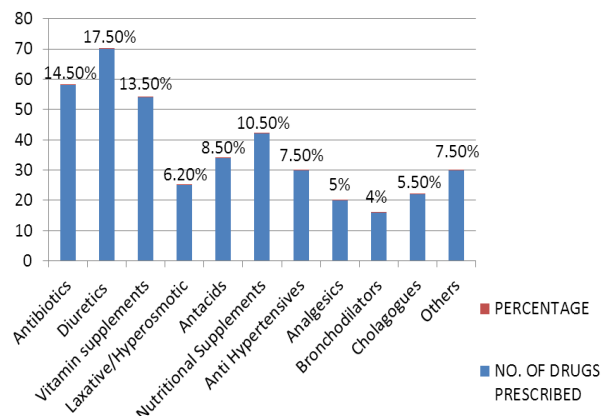
**Figure 2: Alcoholic liver disease with co-morbidities.**

In this study, Portal hypertension is the major complication associated with ALD (30%) 15 people followed by Alcoholic Hepatitis (12%) 6 people, Ascites (8%) 4 people, Esophageal variceal bleeding (8%) 4 people, Gastritis (8%) 4 people, Anemia (6%) 3 people, Jaundice (6%) 3 people, Hepatic Encephalopathy (4%) 2 people and Hepatorenal syndrome (2%) were commonly observed complications. The most common cause of portal hypertension is cirrhosis of liver. Cirrhosis is scarring which accompanies the healing of liver injury caused by hepatitis, alcohol consumption or other causes of liver damage.



**Figure 3: Complications associated with ALD.**

In the present study, the total number of drugs prescribed for 50 patients were 400 drugs, in which the primary category of drugs prescribed was diuretics ( 70, 17.5% ) followed by antibiotics (58, 14.5%), vitamin supplements ( 54, 13.5%), nutritional supplements (42, 10.5%), antacids (34, 8.5%), anti hypertensive's (30, 7.5%), laxatives (25, 6.2%), Cholagogues (22, 5.5%), analgesics (20, 5%), bronchodilators (16, 4%) and others include anti psychotics (8), anti platelets (4), anti diarrheal (5), anti emetics (4) and anti ameobic (10) of which 7% of prescribed drugs respectively. Medications should be individualized depending upon the need, nutritional status, alternatives available and severity of disease. The rational prescribing of drugs will be improved by introducing appropriate educational interventions and involvement of clinical pharmacist in prescribing drugs.



**Figure 4: Distribution of prescribed drugs based on their category.**

## CONCLUSION

Alcoholic liver disease is a major health problem with rising incidence and prevalence. Early diagnosis is required to reinforce alcohol abstinence and improve patient survival. 30% of patients belonged to age group of 31-40 years, middle aged group, which is active and productive mass of society. Abstinence from alcohol reduces the risks of complications and mortality in patients with alcoholic liver disease is the major therapeutic goal. Diabetes mellitus is the major co-morbidity found in 10% of patients. Portal hypertension is the major complication found in 30% of patients and Diuretic therapy is the major found in 17.5% and vitamin supplements are found in 13.5% of patients. The success of future therapy alcoholic liver diseases should concern not only in studying the treatment strategies of the disease but also in improving patients' quality of life. Mortality and morbidity associated with this disease is matter of serious economic loss to the nation and grief for the society. We recommended social support through alcoholics anonymous, inpatient and outpatient rehabilitation programmes, individual counseling, weight reduction in obese patients, alcohol abstinence, increased education, awareness about liver diseases, public health strategies and counseling programs about liver diseases and its impact on health to improve wellbeing of life.

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