

## To Evaluate the Association of Systemic Hypertension and NAFLD

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**Abstract:** Our study conducted in Department of General Medicine, Amaltas Institute of Medical Sciences, Dewas (M.P), we included 55 patients and these patients taken randomly from outpatient department (OPD) to patient admitted in medicine wards. The present study entitled "To Evaluate the Association of Systemic Hypertension and NAFLD" was conducted in the Department of General Medicine; this was a ProspectiveObservational study. The patients selected from the medicine department were entered in this study group. Study group consisted of type 2 diabetes mellitus patients who were taken up from diabetic clinic or admitted in medicine wards in Amaltas Institute of Medical Sciences, Dewas, (M.P). All patients diagnosed with type-2 diabetes of age group 18 to 83 years will be taken into consideration. A careful clinical history was taken. History of associated illness like systemic hypertension is inquired & hypertension was found in 26(47.27%) of patients, addiction in 08(14.55%) patients. In our study fatty changes in liver found in 13(23.63%) patients

**Keywords:** Systemic, Hypertension, NAFLD, Steatosis& NASH.

### INTRODUCTION

NAFLD covers from fatty change (steatosis) to combination of fatty change and hepatitis (stetohepatitis) to fibrosis including cirrhosis but not due to alcohol abuse [1].

Advance stage of fatty liver disease is known as NASH (non alcoholicstetohepatitis). Type 2 diabetes mellitus and metabolic syndrome are associated with Non-alcoholic stetohepatitis (NASH). Many genetic and acquired factors are involved in its pathogenesis. But it is not commonly diagnosed because its diagnosis can be confirmed only by histological evaluation of liver. So, the prevalence of NASH is underestimated [2-4].

Insulin resistance is common in NAFLD as supported by the recent trials. Literature also supports that most people who develop NAFLD have hyperinsulinemic conditions [5]. Insulin resistance leads to following changes in NAFLD:-

- Increase in FFA sterification and fatty acid synthesis
- Increase in glycolysis and fatty acid synthesis
- Inhibition of oxidation
- Reduced release of apolipoprotein B and VLDL

### MATERIAL & METHOD

The present study entitled "To Evaluate the Association of Systemic Hypertension and NAFLD" was conducted in the Department of General Medicine, Amaltas Institute of Medical Sciences, Dewas (M.P) during the period of March 2016 to August 2017.

This was a Prospective Observational study. The patients selected from the medicine department were entered in this study group. Study group consisted of type 2 diabetes mellitus patients who were taken up from diabetic clinic or admitted in medicine wards in Amaltas Institute of Medical Sciences, Dewas, (M.P). All patients diagnosed with type-2 diabetes of age group 18 to 83 years will be taken into consideration.

### Sample size

Total 55 subjects were taken into study. A careful clinical history was taken. It was specially inquired whether patient ever had specially nausea, vomiting, loss of appetite, yellowish discoloration of sclera and urine, colour and consistency of stools

### Inclusion criteria

- All diabetic patients newly or previously diagnosed of 18 to 70 years of age group

**Exclusion criteria**

- Patients who are alcoholic
- Type 1 diabetes mellitus

**Procedure**

All patients diagnosed with type 2 diabetes of age group 18 to 70 years and who are not alcoholic was taken into consideration. The data was collected prospectively and systematically in a pre-established pro forma (designed by the author) after an informed written consent was obtained from all subjects. History, including age, sex, address was noted. A careful history

was taken. It was specially inquired whether patient ever had specially nausea, vomiting, loss of appetite, yellowish discoloration of sclera and urine, colour and consistency of stools. A detailed history of treatment was taken.

History of associated illness like systemic hypertension inquired. Particularly history of alcohol addiction was taken carefully from patient and his relatives. All patients taken into study were strictly non-alcoholic. The patients were undergoing a thorough examination including pulse BP checkup and general physical examination including standing height, weight.

**RESULTS**

**Table-1: Distribution of Cases According to Hypertension**

Age (years)	Male		Female		Total	
	No.	%	No.	%	No.	%
35-50 years	4	26.66	2	18.18	6	23.07
51-65 years	5	33.33	5	45.45	10	38.46
65-83 years	6	40	4	36.36	10	38.46
Total	15	100	11	100	26	100

In our study about 26 patient (47%) found systemic hypertension as associated illness. These patients also divided in Group-A, B and C.

In Group-A, consist of 06 patient (23.07%) in which male is 4 (26.66%) and female 2 (18.18%).

Group-B, consist of total no. Of 10 patients (38.46%), in which 5(33.33) is male and 5 (45.45%) is female patient.

Group-C, included 10 patients (38.46), in which 6 patient (40%) is male and 4 patient (36.36%) is female.

**Table-2: Total no. of patients having fatty changes in liver**

Age (years)	Male		Female		Total	
	No.	%	No.	%	No.	%
35-50 years	2	25	1	20	3	23.07
51-65 years	4	50	3	60	7	53.84
65-83 years	2	25	1	20	3	23.07
Total	8	100	5	100	13	100

**DISCUSSION**

Our study includes 55 patients taken into the study. All patients divided into three groups. Group A consists of age between 35 to 50 years, Group B consists of age between 51-65 years and Group C consists of age between 66-83 years.

In study on NAFLD and NASH show mean level of SGOT/SGPT is 80.9 to 69.8 IU/L respectively. In our study on USG abdomen finding show 13(23.63%) patients having fatty changes liver. Study show 31 (58%) patient have abnormal USG finding and 51% had hyperechogenicity, including fatty liver [6, 7].

Our study shows 13 patients having non-alcoholic fatty liver disease (NAFLD). A study conducted in gastroenterology centre, show 49 patients out of 148 patient show fatty changes in liver. In this study no significant difference in body mass index,

serum hepatic enzymes, serum cholesterol and triglycerides level among patient with non alcoholic fatty liver disease.

**CONCLUSION**

A careful clinical history was taken. History of associated illness like systemic hypertension is inquired & hypertension was found in 26 (47.27%) of patients, addiction in 08(14.55%) patients. In our study fatty changes in liver found in 13(23.63%) patients.

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