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Research Article

## HYPERHOMOCYSTEINEMIA IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD)

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**Abstract:**

**Objective:** To determine the frequency of hyper homocysteinemia in patients with non- alcoholic fatty liver disease (NAFLD)

**Patients and Methods:** A total of fifty patients Non-alcoholic fatty liver disease were included in the study during six-month study period. The criterion for the selection of the patients for the study was those patients diagnosed case of NAFLD. The exclusive criteria were known patients of chronic viral hepatitis, liver abscess, hepatoma, acute hepatitis, connective tissue disorders, and hematological malignancies, pregnant and lactating ladies. After having selected cases for the study, careful history & physical examination was carried out in each patient in particular relation to abdominal examination. The demographical and clinical profile of subjects was also noted. The co-morbidities were also explored while the serum homocysteine level were also to be explored through laboratory parameters along with routine investigations whereas the frequency / percentages (%) and means  $\pm$ SD compute d for study variables.

**Results:** During six month study period total fifty patients had NAFLD were explored and study. The mean  $\pm$  SD for age (yrs) of population was  $53.73 \pm 6.63$ . Regarding gender distribution male 20(40%) and female 30 (60%) and hyper homocysteinemia was observed in 32 (64%) patients respectively.

**Conclusion:** Homocysteine was altogether connected with the existence of NAFLD.

**KeyWords:** Hyperhomocysteinemia, non- alcoholic fatty liver disease and homocysteine

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**INTRODUCTION:**

Non- alcoholic fatty liver disease (NAFLD), which incorporates a range of conditions related with lipid affidavit in hepatocytes, is the most widely recognized liver malady [1]. NAFLD is frequently connected with metabolic hazard factors, for example, heftiness, type II diabetes, dyslipidemia, and insulin opposition. Notwithstanding hepatic complexities, NAFLD is additionally connected with genuine foundational outcomes [2]. Homocysteine is a sulfhydryl-containing amino corrosive essentially delivered and catabolized in the liver [3]. In this way, it is conceivable that homocysteine could be a compelling objective for forestalling the movement of NAFLD and its related cardiovascular intricacies [4]. Be that as it may, just former studies have investigated the relationship among homocysteine and the predominance of NAFLD, and the appropriate response stays disputable [5]. Along these lines, we played out a cross-sectional examination to decide if raised homocysteine was related with an expanded predominance of NAFLD in Pakistani population.

**PATIENT AND METHODS:**

A total of fifty patients Non-alcoholic fatty liver disease were included in the study during six month study period. The criterion for the selection of the patients for the study was those patients diagnosed case of NAFLD. The exclusive criteria were known patients of chronic viral hepatitis, liver abscess, hepatoma, acute hepatitis, connective tissue disorders, and hematological malignancies, pregnant and lactating ladies. After having selected cases for the study, careful history & physical examination was carried out in each patient in particular relation to abdominal examination. The demographical and clinical profile of subjects was also noted. The co-morbidities were also explored while the serum homocysteine level were also to be explored through laboratory parameters along with routine investigations whereas the data was collected on pre-designed proforma and analyzed in SPSS to manipulate the frequencies and percentages.

**RESULTS:**

During six month study period total fifty patients had NAFLD were explored and study. The mean  $\pm$  SD for age (yrs) of population was  $53.73 \pm 6.63$ . The demographical and clinical profile of study population is presented in Table 1.

**TABLE 1: THE DEMOGRAPHICAL AND CLINICAL PROFILE OF STUDY POPULATION**

Parameter	Frequency (N=50)	Percentage (%)
<b>AGE (yrs)</b>		
20-29	06	12
30-39	13	26
40-49	15	30
50-59	09	18
60+	07	14
<b>GENDER</b>		
Male	20	40
Female	30	60
<b>RESIDENCE</b>		
Urban	28	56
Rural	22	44
<b>Co-morbidities</b>		
Diabetes mellitus	22	44
Hypertension	15	30
Dyslipidemia	23	46
Obesity	40	80
<b>Hyperhomocysteinemia</b>		
Yes	32	64
No	18	36

**DISCUSSION:**

In this cross-sectional survey, the primary finding was that raised homocysteine levels were decidedly connected with the predominance of NAFLD in Pakistani populace. Over the previous decade, quickening interest has created in the connection among homocysteine and the commonness of NAFLD. Homocysteine is a sulfhydryl-containing amino acid for the most part created and catabolized in the liver [4-6]. It is conceivable that, within the sight of liver harm, modifications of serum homocysteine levels may happen. Then again, raised homocysteine may on the other hand advance the progression of liver injury [7, 8]. Subsequently, it is conceivable that homocysteine may be a compelling objective for forestalling NAFLD progression and its related cardiovascular intricacies [9, 10]. Won BY et al [11] found that the highest quartile of homocysteine in men was altogether connected with a 6.78-crease expanded for NAFLD. Reliable with these discoveries, the positive relationship of serum homocysteine levels with NAFLD was appeared in meta-studies by Dai Y et al [12].

**CONCLUSION:**

We found that homocysteine was altogether connected with the existence of NAFLD, especially in fatty female populace.

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