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TO EVALUATE THE ASSOCIATION OF ANTHROPOMETRIC INDEX (BODY MASS INDE X AND WAIST-CIRCUMFERENCE) IN PATIENTS WITH NON ALCOHOLIC FATTY LIVER DISEASE

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Study Designed: Observational Study

ABSTRACT:

Background: The present study entitled To Evaluate the Association of Anthropometric Index (body mass index and waist-circumference) in patients with non-alcoholic Fatty Liver Disease" was conducted in the Department of General Medicine, Sri *Aurobindo Institute* of Medical *College* & *PG Institute, Indore.*

Result: Total number of patients have obesity (BMI>25.0) in our study is 20(36.36%). Group-A consist of 06 (10.91%) patient in which male is 3 (50%) and female is 3 (50%). Group-B consist of 07 (12.73%) patient in which male is 2 (28.57%) and female is 5 (71.43%). Group-C consist of 7 (12.73)patients in which male is 5 (71.43%) and female is 2 (28.57%).

Conclusion: A careful clinical history was taken. History of associated illness like systemic hypertension is inquired. A complete physical examination was taken including standing height, weight, waist-circumference and body mass index. Body mass index is obtained by weight (kg) divided by height (meter).

Keywords: Anthropometric, BMI, Non-Alcoholic & Fatty Liver Disease.

Introduction

Non-alcoholic fatty liver disease is a clinicopathological condition characterized by lipid deposition in the hepatocytes of the liver par enchyma. The pathological picture is similar to those of alcoholic-induced liver injury, but it occurs in individuals without history of chronic alcohol ingestion.[1] NAFLD has a large spectrum, that includes steatosis, steatohepatitis with and without fibrosis (NASH), cirrhosis and it can progress to the end stage liver disease. This liver condition is a frequent diagnosis in cases of cryptogenic cirrhosis and has been associated to hepatocellular carcinoma.[2]

Excess weight, mainly the accumulation of visceral fat, is considered the main risk factor for NAFLD, being closely related to the severity of the disease. Currently, clinical anthropometric indicators such as waist-to-height ratio (WHtR) and lipid accumulation product (LAP) are described in the literature as the most sensitive and specific for discriminating visceral fat compared to the classic parameters as waist circumference (WC) and body mass index (BMI).[3]

Material & Method

The present study entitled

"**To Evaluate the Association of Anthropometric In dex (body mass index and waist-circumference) in patients with non-alcoholic Fatty Liver Disease**"

was conducted in the Department of General Medicine, Sri *Aurobindo Institute* of Medical

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College & PG Institute, Indore during the period of Feb 2016 to Feb 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. All patients diagnosed with type-2 diabetes of age group 18 to 83years 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

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

EXCLUSION CRITERIA

1. Patients who are alcoholic
2. 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.

Results

Table 1: Total no. of patients having obesity (BMI > 25.0)

Age (years)	Male		Female		Total	
	No.	%	No.	%	No.	%
35-50 years	3	50.00	3	50.00	6	10.91
51-65 years	2	28.57	5	71.43	7	12.73
65-83 years	5	71.43	2	28.57	7	12.73
Total	10	50.00	10	50.00	20	36.36

Total number of patients have obesity (BMI>25.0) in our study is 20(36.36%).

Group-A consist of 06 (10.91%) patient in which male is 3 (50%) and female is 3 (50%).

Group-B consist of 07 (12.73%) patient in which male is 2 (28.57%) and female is 5 (71.43%).

Group-C consist of 7 (12.73) patients in which male is 5 (71.43%) and female is 2 (28.57%).

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

In our study we found 13 (23%) patients having fatty changes in liver on USG abdomen.

Group-A consist of 3 (23.07%) patients in which male is 2 (25%) and female is 1 (20%), group –B consist of 7 (53.84%) patients in which male is 4 (50%) and female is 3 (60%) patients, group-C consist of 3 (23.07%)patient which is 2(25%)male and 1 female (20%).

Discussion

Our study shows 13 patients having non-alcoholic fatty liver disease (NAFLD). A study conducted in gastroenterology centre, jagjivanram hospital, Mumbai 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.[4,5]

In our study we found that 26 patients (47.27%) out of 55 patient has systemic hypertension associated with type 2 diabetes mellitus and in which 11 patients were female.[6] In our study 18(32.73%) patients receiving insulin therapy for control of their diabetes mellitus and 37(67.27%) patients on oral hypoglycemic drug.[7]

Conclusion

A careful clinical history was taken. History of associated illness like systemic hypertension is inquired. A complete physical examination was taken including standing height, weight, waist-circumference and body mass index. Body mass index is obtained by weight (kg) divided by height (meter).

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