2.1 INTRODUCTION
Nonalcoholic fatty liver disease (NAFLD) is defined as presence of fat in the liver either on imaging or on liver histology after exclusion of secondary causes of fat accumulation, i.e., significant alcohol consumption, certain medications, and other medical conditions.[4] It ultimately progresses to hepatic fibrosis, cirrhosis and liver failure. NAFLD is one of the most common chronic liver diseases worldwide and is a significant cause of morbidity in all age groups.[2] Prevalence of NAFLD is estimated to be around 9-32% in the general population of India with a higher incidence among the obese. In this study total 60 overweight patients selected from general medicine outdoor and indoor patient. Correlation of NAFLD in overweight adults with Clinical and biochemical parameters like Alanine aminotransferase (ALT), Aspartate aminotransferase (AST), Fasting blood glucose, Triglycerides, Total cholesterol, High-density lipoprotein was analyzed. NAFLD show positive significant correlation with BMI (P=0.001), WAIST SIZE (P=.004), HIP LEVEL SIZE (.005), and show no significance with other biochemical parameters.

2.2 Study population: The study was conducted on the rural population falling in the catchment area of this hospital. A sample of convenient 60 overweight patients attending general medicine outdoor and indoor patient services was taken. Written informed consent for voluntary participation was taken from each patient. Confidentiality of patient data will be maintained. Patients of ages 18-55 years, of either gender, with Body Mass Index (BMI) more than 23 (according to the revised Asia-Pacific BMI recommendations by WHO)[5], and willing to participate was included in the study, through purposive sampling.

Exclusion criteria:
a. Alcohol intake of more than 20 g/day for females and more than 30 g/day for males
b. Have previously diagnosed diabetes mellitus; or have obesity due to an endocrine or genetic disorder or have previously diagnosed chronic liver disease.

2.3 Data collection procedures and instruments: The diagnosis of NAFLD was made on the basis of abdominal ultrasonography performed using curvilinear probe (2-5 Hz), identifying ultrasonographic features as bright hepatic echoes, increased hepatorenal echogenicity and vascular blurring of portal or hepatic veins.[3] Hepatitis B surface antigen (HBsAg) and anti-hepatitis C virus (anti-HCV) antibodies was assayed in adults who are diagnosed with fatty liver.

2.4 Clinical Parameters:

2.5 Biochemical Parameters: Alanine aminotransferase (ALT), Aspartate aminotransferase (AST), Fasting blood glucose, Triglycerides, Total cholesterol, High-density lipoprotein levels were estimated by Roach Modular P 800 automated clinical analyzer, for

2.2 Study population: obtained from Ethical Committee of the college.

from 1st June to 31st July 2019. The institutional ethical clearance was obtained from Ethical Committee of the college.
which 5 ml of fasting venous sample was obtained after a 08 h overnight fast.

2.6 Quality control: Internal and external quality control of convenient samples was done as per standard operative procedures (SOPs) of the Department of Biochemistry.

2.7 Statistical analysis: The collected was entered in Excel spreadsheet. Mean and standard deviation was calculated for quantitative data. Percentages and proportions were calculated for qualitative data. Chi-square test will be used for categorical variables. Pearson correlation will be found out between BMI and NAFLD, considering P value <0.05 as statistically significant. Correlation and regression models will be compared for accuracy and precision.

OBSERVATION AND RESULTS:
A total 60 overweight adult patients were included in the study. Mean age of overweight adult patients was 41±11.96 yr. Mean weight 79.68±14.95, mean height 160.39±8.17, mean BMI 30.96±5.11, mean waist size 102±7.86 cms, mean hip level size 106.75±7.86 cms. In 60 overweight adult patients, 13(21.7%) has no fatty liver 25 (41.7%) has Grade 1 (Mild), 17(28.3%) has Grade 2 (Moderate) and 05 (8.33%) has Grade 3 (severe) fatty liver on USG. The present study confirmed that NAFLD is high from 10% to 30%, the lowest figures being from rural areas of West Bengal and the highest from urban population of Chennai. The present study shows no significance with other biochemical parameters. This study showed that NAFLD in nearly two thirds of the overweight adult patients in rural population. The clinical and biochemical parameters associated with higher risk of NAFLD were higher BMI, WC and HIP Level size. Screening for NAFLD should be incorporated in the evaluation of all overweight adults, especially if one or more of the risk markers are present.

5. CONCLUSION:
This study showed that NAFLD in nearly two thirds of the overweight adult patients in rural population. The clinical and biochemical parameters associated with higher risk of NAFLD were higher BMI, WC and HIP Level size. Screening for NAFLD should be incorporated in the evaluation of all overweight adults, especially if one or more of the risk markers are present.

6. REFERENCES

Biochemical parameters
In 60 overweight adult patients the mean Urea 25.71±8.42, mean Creatinine 1±0.00, mean Calcium 9±66, mean phosphorus 3.64±621, mean triglyceride 148.75±59.63, mean cholesterol 185.64±30.10, mean HDL 39.89±10.92, mean LDL 106.07±35.01, mean VLDL 35.04±15.03, mean SGOT 54.46±65.25, mean SGPT 71.54±69.31, mean TP 7.04±5.7, mean Alb 4±5.7, mean Glb 3.04±4.2, mean Glucose was 91.61±8.36.

Correlation of NAFLD in overweight adults with Clinical and Biochemical parameter
In the present study, NAFLD show positive significant correlation with BMI (P=0.001), WAIST SIZE (P=0.004), HIP LEVEL SIZE (.005), and show no significance with other biochemical parameters.

4. DISCUSSION:
In India, the prevalence of NAFLD in the general population varies from 10% to 30%, the lowest figures being from rural areas of West Bengal and the highest from urban population of Chennai. The present USG based study showed 41.7% has Grade 1 (Mild), 28.3% has Grade 2 (Moderate) and 05 8.33% has Grade 3 (severe) fatty liver in overweight adults in rural population, and shows positive significant correlation with BMI (P=0.001), WAIST SIZE (P=0.004), HIP LEVEL SIZE (.005). Study done by Vandana jain et al. shows a high prevalence of NAFLD (62.5%) in the overweight obese adolescents. BMI, WC percent, insulin resistance and level of ALT and AST were positively associated with high risk of NAFLD in adolescent. Shows same observation. Harsimran Singh et al. reported positive significant correlation with waist circumstance, mean BMI, mean serum triglyceride, mean serum HDL and mean serum FBS with NAFLD group.