ABSTRACT

The risk factor profile of myocardial infarction in young includes higher smoking rates, more family histories of coronary heart disease, and a lipid phenotype that is characterized by a predominance of elevated triglyceride-rich lipoproteins. Remnant cholesterol is defined as the cholesterol fraction in triglyceride-rich remnant lipoproteins.

AIM:–

To identify the causal association between elevated levels of remnant cholesterol and myocardial infarction in age less than 40 years.

METHODOLOGY:–

This is a case control study of sample size 100(50 cases –patients admitted with STEMI of age group less than 40 years and 50 age and sex matched controls) conducted from July2016- June2017. Remnant cholesterol levels were calculated by the formula total cholesterol minus LDL minus HDL cholesterol and other lipid parameters and ratios were assessed.

OBSERVATION AND RESULTS:–

Mean age of the study group was 36.15 years and all of the patients and controls were male and 34% of the patients were below 35 years. Smoking, alcoholism, hypertension were statistically significant risk factors. Total cholesterol, LDL cholesterol, HDL cholesterol, obesity, and cholesterol ratios were significant statistically. The mean triglyceride among cases was significantly high compared to controls throwing light to the increased incidence hypertriglyceridemia among patients with young myocardial infarction and had a P value of 0.001. the remnant cholesterol levels calculated as total cholesterol minus HDL cholesterol minus LDL cholesterol. The mean remnant cholesterol among cases was 62.4mg/dl and
that of controls were 35.6mg/dl. The levels were approximately two times higher in patients when compared to controls and was significant statistically with a p value of 0.001.

CONCLUSION:-

The risk factor profile of young patients with myocardial infarction is different compared to elderly individuals. There is an accelerated atherosclerosis which is contributed by a higher incidence of smoking, alcoholism diabetes and hypertension. Remnant cholesterol is the non HDL LDL fraction and has a significant association with premature myocardial infarction. The level of remnant cholesterol can be calculated from a lipid profile and do not need a separate estimation.

LIMITATION:-

The case–control study design, where measurements are obtained after the outcome of interest has already occurred. No information available on the impact of the acute phase of myocardial infarction on remnant cholesterol

KEYWORDS:

Myocardial Infarction, Remnant cholesterol, Total cholesterol, LDL Cholesterol, HDL Cholesterol