

ABSTRACT

Introduction:

Acute Myocardial Infarction is the leading cause of mortality in both developed and developing nation such as India. Important risk factors are diabetes, hypertension, smoking, dyslipidemia, abdominal obesity, unhealthy diet, physical inactivity. Rapid urbanisation and change in life style in last two decade have led to growing burden of coronary heart disease. Killip class is a bed side assessment test which is useful in predicting mortality in acute myocardial infarction. Hyperuricemia is associated in increased cardiovascular mortality in high risk patients. There are few studies which states the association between killip class and uric acid level. So our goal is to find out the any quantal relationship between killip class and serum uric acid in acute myocardial infarction in our population.

Material and method:

Patients more than 18 years of age diagnosed to have acute MI who presented to hospital within 24 hours of onset of symptoms were included in the Study. Patient with increased myocardial enzyme concentrations with typical chest pain persisting more than 30 minutes with electrocardiographic changes (including ischemic ST-segment depression, ST-segment elevation or pathologic Q waves), Increased enzyme concentrations were defined as (Creatine kinase, Troponin) peak level more than 2 times upper limit of normal. Complete history taking and physical examinations was done, patient with exclusion criteria was identified and excluded in the study. After getting informed consent from the patient, they were included in study. The data of each patient will be collected in a special proforma, which includes patient's name, age, sex, demographic details and presenting complaints. Blood pressure, random sugar, urea, creatinine will be taken immediately after admission, killip classification applied at the time of admissions. Baseline Serum Uric acid level will be done by withdrawing 4ml of blood. uric acid level in serum is measured by uricase method with COBRA INTEGRA/COBAS C SYSTEM. Cardiac enzyme assay were done in patients with NSTEMI. Reference level for uric acid Male -3.1-7.0 mg/dl. Female- 2.5 to 5.6 mg/dl. The data of each patient will be collected in specific proforma (ANNEXURE 2) which includes patient's name, age, sex, demographic details, presenting complaints, risk

factors and all clinical data. All the relevant data and values are then entered in master chart in Microsoft excel format and then analyzed statistically.

Results: In our study total of 70 patients were included, who were admitted in ICCU. All patients were included in study after getting consent, detail history and physical examination and after ruling out the exclusion criteria. Out of 70 patients 44 patients were male and 26 patients were females. This distribution shows the predominance of males in acute myocardial infarction. This results are similar to other study regarding male predominance in acute myocardial infarction.

Uric acid of male patients is significantly higher than the female patient, which is similar to other studies. In our study the risk factors such as diabetes, hypertension, smoking were taken into consideration. Out of 70 patients 49 patients were hypertensive and 46 patients has diabetes, 37 patients had smoking habits, smoking is common in males in our population. Out of 70 patients in our study 33 patients had AMI, 8 patients were both AMI/LWMI, 24 patients were IWMI, 5 patients had NSTEMI.

Out of 70 patients in our study, 80% of the patients were under killip class I and II at the time of admission, 20% of the patients were on killip class III and IV at the time of admission. Uric acid level was significantly higher among patients in class IV (7.58), in class III (7.25) than patients class II (5.25) and class I (4.47). Mean difference was statistically significant by kruskal wallis test ($p=0.000$). The results in our study shows that serum uric acid level are high in killip class III and IV in acute myocardial infarction patients. Combination of serum acid and killip classification will be useful in assessing the prognosis in acute myocardial infarction patients.

Conclusion: In general, serum uric acid level is significantly higher in male patients than the female patients. Hyperuricemia is associated with killip class III and IV in Acute myocardial infarction patients. Further study on combination of killip class and serum uric acid level in predicting mortality will be informative and useful.

Keywords : Myocardial Infarction, Killip Class & Hyperuricemia.