**NEGATIVE MULTIPLICATION EFFECT OF KIDNEY DYSFUNCTION ON NON VALVULAR ATRIAL FIBRILLATION**

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**Objective:** Atrial fibrillation is the most common type of heart arrhythmia and contributes to significant morbidity & mortality which is on rise over last two decades. Kidney disease is a strong and independent risk factor for cardiovascular(CV) complications & mortality. We performed a study to investigate the effects of renal dysfunction on CV outcomes in a population with non-valvular atrial fibrillation (NVAF).

**Method:** A retrospective review of data from single center between 2005 and 2013 was performed. All patients with NVAF were selected who were on guideline directed anticoagulation therapy with Coumadin. Renal dysfunction was defined as GFR of <60, with control group with GFR of ≥60. The selected CV outcomes of interest were myocardial infarction (MI), stroke (CVA), and death. MI was defined as NSTEMI type 1 or STEMI confirmed by in house cardiologist or by subsequent testing; CVA as ischemic stroke or TIA confirmed by in house neurology service or imaging. The data on baseline characteristics was collected and used to control for confounders. Chi- Square tests and t-tests were used for comparison of baseline characteristics. Univariate Cox regression analysis was conducted to examine the relationship between renal dysfunction and the time to the development of MI, CVA & death.

**Results:** Out of 656 selected patients, 339 patients had GFR < 60 whereas 317 had a GFR of ≥60. Average age for the patient group with GFR < 60 was 73.5(13.3) and for group with GFR ≥60 was 67.1(15.4). Fifty percent of patients in each group were females. The prevalence of HTN, DM, CAD, CHF, PVD in these comparison groups GFR>60 Vs ≤60 were 93 Vs 80, 40 Vs 27, 24 Vs 18, 34 Vs 29 and 10 Vs 9 percent respectively. Group with GFR of <60 was associated with a statistically significant increased incidence for MI (17% VS 9%; p 0.002), death (25% VS 13%; p< 0.0001) and composite of MI, stroke and death (48% VS 31 %; p <00001). Statistically significant increased incidence of stroke was not found (22% VS15%; p0.0394). **Conclusion:** **Conclusion:** GFR below 60 is independently associated with MI, death and MI, Stroke and death combined in patients with NVAF.

Abbreviations: CI: Confidence interval; CAD: Coronary artery disease; GFR: Glomerular filtration rate