ACUTE KIDNEY INJURY IN PATIENTS WITH PREEXISTING CORONARY ARTERY DISEASE ADMITTED WITH MYOCARDIAL INFARCTION IS ASSOCIATED WITH INCREASED MORTALITY
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BACKGROUND: Acute kidney injury (AKI) is defined by KDIGO as an increase in serum creatinine (SCr) of ≥ 1.5 times baseline or an increase by ≥ 26.5 µmol/l in 48 hours. AKI complicating myocardial infarction is associated with higher short and long-term morbidity and mortality. Contributing factors to developing AKI include cardiogenic shock, preexisting CKD, diabetes mellitus and use of cardiac catheterization.

OBJECTIVE: To determine the impact of AKI on 30 day mortality rates in individuals with pre-existing CAD admitted into UMMC with an MI.

METHODS: Retrospective, observational study of patients with pre-existing CAD admitted with STEMI or NSTEMI in UMMC from September 2016 to January 2017.

RESULTS: 71 patients (53 males, 18 females) with a mean age of 64 years old were included. There were 16 (23%) STEMI and 55 (77%) NSTEMI cases. 16 (23%) patients had previous MI, 11 (15%) had previous CABG, 31 (44%) had previous angioplasty and 13 (18%) had non-revascularised CAD diagnosed on previous angiograms. 11 (15%) patients had peak SCr ≥ 1.5 times baseline and 23 (32%) patients had AKI defined as an increase in SCr by ≥ 26.5 µmol/l above baseline SCr within 48 hours. 30 day mortality was significantly increased in patients who develop AKI (p<0.05) and occurred in 6 (55%) patients with a SCr ≥ 1.5 times baseline and in 8 (35%) patients with an increase in SCr by ≥ 26.5 µmol/l.

CONCLUSION: While recognizing the small number included in our study, our results reflect the increased mortality associated with AKI in MI patients seen in larger studies. Identifying patients at risk of AKI is important and implementing steps to minimize the risk and treat AKI early would be essential to improving mortality. A multidisciplinary team involving the nephrologists at managing “at risk” patients would be an option to explore in the future.