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Cardio-renal syndrome in acute decompensated heart failure patients admitted in a tertiary level cardiac hospital in Bangladesh:

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Introduction: Patients with acute decompensated chronic heart failure, often develop acute renal function deterioration or cardio renal syndrome (type I) which is associated with increased mortality, longer hospital stays, and more frequent readmissions. There is still a paucity of data on cardio-renal syndrome in acute decompensation of chronic heart failure in Bangladeshi population.

Purpose: To detect frequency of cardio-renal syndrome in acute decompensated heart failure patients admitted in tertiary cardiac hospital in Bangladesh.

Method: We carried out a prospective observational study of chronic heart failure patients who were admitted due to acute compensation in a tertiary cardiac hospital in Bangladesh. Decompensation was defined as worsening of NYHA class of dyspnea requiring intravenous diuretics. Acute increase in serum creatinine level > 0.3 mg/dL (26.5 mmol/L) from the baseline considered as acute kidney injury.

Results: 239 patients were included in this study. Among them 186 (78%) were male and 53 (22%) were female. Acute renal function deterioration occurs in 88 (36.9%) patients with mean serum creatinine level was 2.43 (+ 1.07) mg/dl. Out of 25 patients with CKD, 11 (56%) patients developed further renal function deterioration whereas 84 (35.9%) patients developed AKI in rest of the patients. Most common cardiovascular risk factors were DM in 65 (27%) patients, HTN in 56 (23%), dyslipidemia in 36 (15%) patients and 50 (21%) patients were smoker. Underlying causes of chronic heart failure were: ischaemic cardiomyopathy (ICM) in 112 (47%), Old MI in 56 (23%), dilated cardiomyopathy (DCM) in 35 (15%) and others including valvular heart diseases in 36 (15%) patients.

Conclusion: Large proportion of acute decompensated heart failure patients develop acute renal function deterioration during hospital stay. So overall prevalence of cardio-renal syndrome in Bangladeshi population will help us to improve further patient care in the management of chronic heart failure.