**THE INFLUENCE OF DIABETES ON CARDIOVASCULAR OUTCOMES IN ACUTE HEART FAILURE PATIENTS IN SINGAPORE**

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Introduction: Few studies have specifically examined the influence of diabetes on cardiovascular outcomes in patients admitted with acute heart failure. We aimed to investigate the interaction between diabetes and various clinical characteristics in our local heart failure population and determine the effect, if any, of diabetes on mortality. Methods: We studied 2122 patients admitted to the National Heart Centre Singapore and Singapore General Hospital over a 2-year period, from 1st January 2008 to 31st December 2009 with acute heart failure. We analysed the clinical characteristics of patients with diabetes (N=1108, 52%) and without diabetes (N=1014, 48%) and correlated them with mortality.

Results: When stratified according to left ventricular ejection fraction (LVEF), we found that depressed LVEF conferred an over 50% higher mortality in the diabetic group (HR 1.581, p=0.005 among patients with LVEF 30-49% and HR 1.535, p=0.010 among patients with LVEF <30%). Impaired LVEF did not statistically affect mortality in the non-diabetic group.Of note, patients with diabetes had a poorer outcome in the presence of renal impairment (HR 1.877, p<0.0001 in the diabetic group; HR 1.755, p<0.0001 in the non-diabetic group), or if the patients required defibrillation (HR 5.326, p=0.004 in the diabetic group; HR 5.197, p=0.001 in the non-diabetic group) during stay.

Conclusions: Heart failure patients with diabetes and impaired LVEF have an over 50% increased mortality compared to those with normal LVEF. The relationship between diabetes, impaired LVEF and mortality should be further evaluated in a prospective study looking at the potential mechanisms of this association.