**PREDICTORS OF HYPERBILIRUBINEMIA AMONG PATIENTS WITH NON-ISCHEMIC HEART FAILURE AND PROGNOSTIC IMPLICATIONS**

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**Background:**Heart failure (HF) is a devastating disease characterized by a poor prognosis. HF has a negative impact on the function of all organs including the liver. The clinical relevance of hyperbilirubinemia among patients with HF has not fully been explored.

**Objective:** To assess the prognostic utility of hyperbilirubinemia in terms of 30-day readmission and all-cause mortality among patients with HF secondary to non-ischemic cardiomyopathy. To identify predictors of hyperbilirubinemia.

**Method:** Retrospective cohort study of 261 patients 18 years and above with a diagnosis of HF with reduced ejection fraction (HFrEF). Patients with coronary artery disease, preserved ejection fraction, cancer, end stage renal disease and documented liver disease not due to HF were excluded. Elevated total bilirubin and direct bilirubin were taken as greater than 1mg/dL and 0.3mg/dL respectively representing the upper limit of normal in our laboratory. The independent Student t-test, Chi-squared test and Pearson’s coefficient were applied as required. Survival analysis was assessed with Cox's regression. The level of significance was set at a p value of ≤ 0.05 and confidence interval of 95 %.

**Results:** Of the 261 patients recruited in this study, 23 were re-admitted with 30 days of discharge while 21 patients died after a minimum follow up of one year and a maximum follow up for about 11 years. Following Cox’s regression analysis, elevated total bilirubin (p = 0.046) and increasing age (0.020) were the only predictors of mortality in this study. However, elevated pulmonary artery pressure (p = 0.002) on echocardiography as well as a low body mass index (p = 0.013) predicted 30-day re-admission in this study. After multiple linear regression, hemoglobin (p = 0.011) and elevated direct bilirubin (p = 0.0001) were predictive of elevated total bilirubin. Following multiple linear regression, elevated total bilirubin (p = 0.0001) and longer length of hospital stay (p= 0.001) were predictive of elevated direct bilirubin.

**Conclusion:** Elevated total bilirubin may be an unrecognized marker of death among patients with HFrEF secondary to non-ischemic cardiomyopathy.