

## **Elevated Total Bilirubin as a Predictor of All-Cause mortality in Left Ventricular Systolic Dysfunction**

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**Introduction:** Patients with heart failure often have elevated total bilirubin (TB) levels, which are often attributed to hepatic congestion. The prognostic value of this finding has not been evaluated.

**Methods:** We retrospectively reviewed the charts of all patients followed at our heart failure center. We included all pts with left ventricular ejection fraction (LVEF)<40%. Elevated TB was defined as TB≥30μmol/L (1.5 times the upper limit of normal). The primary endpoint was all-cause mortality. The secondary endpoint was a composite of death, transplant, and VAD implantation.

**Results:** Of 1020 patients with LVEF<40%, 162 had elevated TB. The mean age (standard deviation) for patients with elevated TB vs. controls was 62 (14) vs. 67 (13) (p=0.04). The mean LVEF was similar, 23%(8) vs. 24%(8) for patients with elevated TB vs. controls. There were less females in the elevated TB than the control group (14.2% vs. 25.2%, p<0.001). There were 54 deaths (33.3%), 2 transplants (1.2%) and 6 VADs (3.7%) in patients with elevated TB vs. 183 deaths (21.3%), 5 transplants (0.6%) and 12 VADs (1.4%) in controls. The median follow-up was 495 days (1<sup>st</sup> and 3<sup>rd</sup> quartiles: 110,1147) Elevated TB was independently associated with increased all-cause mortality, OR 1.88 (95%CI 1.32-2.80) and an increased composite endpoint of death/transplant/VAD, OR 1.96 (95%CI 1.33-2.90). Age and LVEF were also independently associated with increased mortality with OR 1.05 (95%CI 1.04-1.07) and OR 0.95 (95%CI 0.94-0.97), respectively.

**Discussion:** Risk of mortality, and the composite endpoint of death, transplantation or VAD are doubled in patients with elevated TB compared to controls.

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