

**Correlation between low body mass index and clinical safety outcome measures of patients with congestive heart failure: perspective of a single-centre, prospective pilot study**

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**Background/Introduction:** The correlation between low body mass index (BMI) and congestive heart failure (obesity paradox) has been described in the literature; however, the association between BMI and clinical outcome measures is not well characterized. **Purpose:** This study aimed to describe the correlation among BMI and myocardial infarction (MI)/cerebrovascular accident (CVA)/mortality composite outcome, combined infection/bleeding and combined CVA/transient ischaemic attacks (TIA)/unexplained syncope outcome measures of patients with heart failure with reduced ejection fraction (HFrEF). **Methods:** Retrospective analysis of prospectively collected data of a single centre heart failure registry in Saudi Arabia. **Results:** Of 167 patients with HFrEF, 41 (25%) had BMI of  $\leq 24$  kg/m<sup>2</sup>. The low BMI group had higher composite MI/CVA/mortality (19% vs 3%; P=0.014) and composite infection/bleeding (12% vs 19%; P=0.016) rates compared with those with BMI of  $>24$  kg/m<sup>2</sup>. Moreover, the study revealed that lower the BMI, higher the CVA/TIA/unexplained syncope (23.9, 5.5 vs 28.7, 6.2; P=0.01), higher the composite MI/CVA/mortality (26.4, 5.6 vs 29, 6.3; P=0.014) and lower the combined infection/bleeding (27.7, 5.8 vs 31.3, 7.3; P=0.01) rates. **Conclusion:** Patients with HFrEF having BMI of  $\leq 24$  kg/m<sup>2</sup> had a higher incidence of MI/CVA/mortality, higher combined CVA/TIA/unexplained syncope incidence and lower combined incidence of bleeding/infection compared with those having BMI of  $>24$  kg/m<sup>2</sup>.

