

ABSTRACT : Dr. Abdi Salat Noor

Title: *Prevalence and Factors Associated with Iron Deficiency Among Patients Hospitalized with Acute Decompensated Heart Failure at Mbarara Regional Referral Hospital*

Aim: Iron deficiency is one of the commonest comorbidities occurring among heart failure patients. Iron deficiency in heart failure is an independent predictor of heart failure outcomes. There is scarcity of data regarding its prevalence in our setting especially among patients presenting with acutely decompensated chronic heart failure.

Methods: Patients in hospital for acutely decompensated chronic heart failure had their iron parameters assessed during hospital admission.

Results: The participants' median age was 54 years, with IQR of 40-67. Majority had pre admission NYHA functional class III or IV [91 patients (60.7%)], 38 patients (25.3%) respectively. The prevalence of heart failure with reduced or mildly reduced LVEF (defined as LVEF <50%) was 95 (67%). Iron deficiency, defined as Serum iron levels below 13 μmol per liter and a transferrin saturation (TSAT) below 20% was present in 84 patients [(56%) (95% CI 47.7–64.1%)]. Iron deficiency was common in both anemic patients at 72.2% and non-anemic patients at 43%.

Analysis of the factors associated with iron deficiency using multivariate logistic regression analysis showed that the presence of evidence of congestion (fluid overload) like pedal edema on physical examination (odds ratio (OR) 3.197; 95% CI 1.015-10.076; P =0.047) and hsCRP above 3 (OR 7.982; 95% CI (2.514-25.343); P <0.001) were associated independently with iron deficiency.

Conclusion: More than half of the patients with acute decompensated heart failure presenting to us at Mbarara regional referral hospital are iron deficient and 43% of them have iron deficiency but no anemia. High serum level of high-sensitivity CRP at admission was found to have independent association with iron deficiency. We therefore recommend that screening for iron deficiency be done at admission for all patients admitted with acute decompensated heart failure.