Impact of Anemia on In-Hospital Outcomes in STEMI Patients

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Background:

Incidental finding of anemia in STEMI patients is a frequent condition However, its impact on in-hospital prognosis remain uncertain.

Aim and objectives:

To assess the association between hemoglobin levels and in-hospital outcomes in ST-segment elevation myocardial infarction (STEMI) patients.

Methods:

This was a retrospective cohort study of 1,027 consecutive STEMI patients, from July 2022 - March 2023. The cohort was divided into two groups according to the presence of anemia on admission. Anemia was defined as hemoglobin levels of 12 g/dL in women and 13 g/dL in men: group 1 with anemia (255 (24.8%)) and group 2 without anemia (772 (75.2%)). Multiple logistic regression was used to examine the factors affecting in-hospital complications**.**

Result:

255 (24.8%) patients were anemic at admission. Anemia was higher in women than men (49.7% vs. 20.5%; $p < 0.001$). Anemic group was older (59.5 ± 12.97 vs. 53.3 ± 11.76 years; $p < 0.001$) and had a higher prevalence of hypertension and diabetes mellitus (DM) (63.5% vs. 44.6% ($p < 0.001$) and 65.9% vs. 55.7% ($p = 0.005$), respectively). Anemic group had longer hospital stays (6.5 ± 7.4 vs. 4.77 ± 4.9 days; $p < 0.001$) and a higher in-hospital death rate (5.9% vs. 2.5%; $p = 0.014$). Using multivariate analysis, anemia was not a significant independent predictor for in-hospital complications.

Conclusion:

Anemia is a common comorbidity in STEMI. It is associated with a 2.5-fold increase in in-hospital mortality and a significantly longer length of hospitalization.

Keywords:

STEMI, Anemia, Prognosis