Anemia, renal dysfunction, and their interaction in patients with chronic heart failure.

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Abstract
Anemia and renal dysfunction (RD) are frequent complications seen in chronic heart failure (HF). However, the prevalence and interaction of these co-morbidities in a representative population of outpatients with chronic HF is poorly described. In this study, it was sought to determine the association between RD and anemia in patients with HF enrolled in a community-based HF program. Nine hundred fifty-five patients with HF due to left ventricular systolic dysfunction were investigated for the prevalence of anemia and its cause and followed for a median of 531 days. Anemia was defined as hemoglobin < 12.0 g/dl in women and < 13.0 g/dl in men. RD was defined as a calculated glomerular filtration rate of < 60 ml/min. The prevalence of anemia was 32%. Fifty-three percent of patients with and 27% of those without anemia had > or = 1 test suggesting hematinic deficiency. The prevalence of RD was 54%. Forty-one percent of patients with and 22% of patients without RD had anemia, with similar proportions associated with iron deficiency in the presence or absence of RD. Anemia and RD independently predicted a worse outcome, and this effect was additive. In conclusion, in outpatients with chronic HF, anemia and RD are common and co-exist but confer independent prognostic information. A deficiency of conventional hematinic factors may cause about 1/3 of anemia in this clinical setting.

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