Updated Heart Failure Guidelines Include New Recommendations for Screening and Treatment of Iron Deficiency

In August 2021, the European Society of Cardiology (ESC) updated its guidelines for the diagnosis and treatment of acute and chronic heart failure (HF).[1] The update included new recommendations for the management of non-cardiovascular co-morbidities of HF, including iron deficiency (ID). Basing their recommendations on results of the AFFIRM-AHF trial,[2] as well as meta-analyses of other randomized control trials,[1] new guidelines advise providers who care for patients with HF and ID on the best strategies to identify and treat patients with both disorders.

A CALL FOR UPDATED GUIDELINES

In a 2018 publication in the European Journal of Heart Failure, McDonagh, T., et al., called for the ESC to complement the most recent guidelines (published in 2016) for the management of ID in HF in "a stepwise manner, from initial screening and diagnosis through to treatment and follow-up."[3] They point to the statistic that as many as 70% of patients with HF may also have ID, but that it is underdiagnosed because of the lack of practical guidance on how to screen for, diagnose and manage it. The authors advised that iron status be checked in patients with existing HF, particularly if symptoms persist despite receiving optimal HF treatment.

NEW RECOMMENDATIONS

Section 13.5 of the ESC's new guidelines defines ID and anemia in patients with HF as either a serum ferritin concentration of less than 100 ng/mL or between 100 and 299 ng/mL if transferrin saturation (TSAT) is under 20%. These thresholds are important, because if TSAT is less than 20% the body is unable to store or use iron, even if ferritin levels are above 100ng/mL. The society notes that higher cut-offs are also in place because the systemic inflammation present in HF increases ferritin concentration, which could erroneously lead clinicians to conclude that a patient's iron levels are within normal range.

Because the ESC estimates that ID is present in up to 55% of patients with chronic HF and up to 80% of patients with acute HF and contributes to circulatory, skeletal, and muscular dysfunction, it recommends that all patients with HF be screened regularly using full blood count, serum ferritin concentration and TSAT levels (Class I). This new recommendation represents an important advance in the screening and diagnosis of ID in HF patients, answering McDonagh and colleagues' 2018 call to monitor patients for ID frequently, not just at HF diagnosis.

Upon a confirmed ID diagnosis, the existing recommendations to consider intravenous (IV) ferric carboxymaltose (FCM) to improve HF symptoms, exercise capacity, and quality of life remain unchanged (Class IIa recommendation). An important update was the recommendation to consider IV FCM in symptomatic HF patients with ID recently hospitalized for acute HF, in order to improve HF symptoms and reduce the risk of HF hospitalization (Class IIa recommendation). This was based on the recent results of the AFFIRM-AHF trial, which demonstrated that IV FCM administered to patients upon discharge for an acute HF event reduced rehospitalizations, improved exercise capacity and increased quality of life.

ONGOING TRIALS

Concluding its updated guidelines on ID in HF, the ESC notes that an ongoing study investigating the effects of IV FCM in patients with HF with preserved ejection fraction (HFpEF), as well as outcomes trials to determine the efficacy of other iron formulations to treat ID in patients with both HFrEF and HFpEF are expected to provide more evidence for future recommendations. The authors conclude that, pending the results of these ongoing studies, the current most effective method of iron repletion is by IV FCM, as it is safe, improves exercise capacity and quality of life while reducing hospitalization and death.

KEY TAKEAWAY

The ESC provided updated guidelines in 2021 based on a wealth of clinical investigations, novel therapies and emerging evidence that contribute to better diagnosis and management of patients with HF. Although ID is a serious comorbidity of HF and can negatively impact a patient's quality of life and health-related outcomes, it is treatable with existing therapies and more promising ones in the pipeline. By following ESC's new recommendations for regular screening, providers can identify and treat ID sooner, reducing HF-related hospitalization and morbidity.

The full updated guidelines can be accessed **here**.

References:

1. McDonagh, Theresa A., et al. "2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure." European heart journal (2021): ehab368.
2. Ponikowski, Piotr, et al. "Ferric carboxymaltose for iron deficiency at discharge after acute heart failure: a multicentre, double-blind, randomised, controlled trial." The Lancet 396.10266 (2020): 1895-1904.
3. McDonagh, Theresa, et al. "Screening, diagnosis and treatment of iron deficiency in chronic heart failure: putting the 2016 European Society of Cardiology heart failure guidelines into clinical practice." European journal of heart failure 20.12 (2018): 1664-1672.