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## Effect of oral iron repletion with Feralgine™ in patients with heart failure

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**Statement of the Problem:** Iron deficiency (ID) either with or without anemia (IDA), is an important comorbidity in heart failure (HF) patients and is associated with a worse prognosis. ID is present in approximately 50% of patients with HF with reduced left ventricular ejection fraction (HFrEF) and is an independent predictor of reduced functional capacity and mortality. Inexpensive and readily available oral iron supplementation, also at high dosage, has been demonstrated to be ineffective in improving exercise capacity over 16 weeks ( ). Oral iron replacement treatment with the new compound Feralgine™ (a new patented co-processed oral iron preparation between ferrous bisglycinate chelate and sodium alginate) has recently demonstrated to be more available than the gold-standard ferrous sulphate. The purpose of this observational study was to preliminarily understand the effectiveness of Feralgine™ supplementation in improving ID, IDA and HF symptoms during a 12 weeks treatment course.

**Orientation:** A preliminary study was been conducted on 41 HF patients (29 men and 12 women aged between 73 and 87 years old) affected by chronic heart failure (CHF) (38 patients are class III NYHA and 3 patients are IV Class NYHA) plus ID and IDA: 25 patients (60%) with HFrEF <40% and 16 (40%) with HFrEF between 40% and 50%. Every patient has been supplemented for 12 weeks with 30 mg of elemental iron belonging to Feralgine™ maintaining the previous HF drug's treatment

**Findings:** At the end of oral iron supplementation (12 weeks) an increase was observed in Hb and ferritin, and surprisingly, 36 of the 41 patients (88%) had reduced their NYHA class from III to II.

**Conclusion & Significance:** To our knowledge this is the first time that an oral iron supplementation with low elemental iron (30 mg/daily) has shown to be effective in improve HF symptomatology in ID/IDA HF associated patients.

### Recent Publications:

1. Rocha B M L, et al. (2018) The burden of iron deficiency in heart failure. *JACC* 71(7):782–93.
2. Baldacci M, et al. (2018) Iron deficiency anemia (IDA) and iron deficiency (ID): are alginates a good choice to improve oral iron bioavailability and safety. *J Transl Sci.* 4(2): 1–3.
3. Bagna, et al. (2018) Efficacy of supplementation with iron sulfate compared to iron bisglycinate chelate in preterm infants. *Current Pediatric Reviews* 14(1):1–7.
4. Lewis G D, et al. (2017) Effect of oral iron repletion on exercise capacity in patients with heart failure with reduced ejection fraction and iron deficiency. *The IRONOUT HF randomized clinical trial. JAMA* 317(19): 1958–1966.
5. Beverborg N G, et al. (2017) Anemia in heart failure. *JACC: Heart Failure* 1–8

### Biography

Marco Bertini has his expertise in Clinical Pharmacology. He is a Medical Doctor with a PhD in Clinical Pharmacology and Paediatrics. He was teaching Clinical Pharmacology in Pisa University, Italy and is actually involved in R&D in a Pharmaceutical Company (Laboratori Baldacci SpA). He has published more than 100 articles on different medical topics and was invited as "Speaker" in different international congresses. He is an Editorial Board Member of different international journals and is actively involved in Translational Medicine.

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