

Iron Therapy in Heart Failure

Student EBM presentations

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October 2015



The question

[Scenario]

“Mr Peck is a 74 year old man who has recently been diagnosed with stage 2 CHF. He also has iron deficiency and has found on the internet that iron supplements may be of help with his quality of life. He wants to know your opinion”

[Clinical Question]

Is iron repletion beneficial in heart failure patients with iron deficiency?

P	Adults over 60 diagnosed with stage 2 or above heart failure with iron deficiency
I	Iron repletion with standard therapy
C	Standard therapy with placebo
O	Quality of life, mortality, hospital admissions, complications

The search and search results

- Pubmed search with MeSH term “heart failure” AND normal terms “iron deficiency” and “quality of life”
- 67 results, filtered to ‘Clinical Trials’
- 10 results, chose most relevant result to clinical scenario
- The effect of intravenous ferric carboxymaltose on health-related quality of life in patients with chronic heart failure and iron deficiency: a subanalysis of the FAIR-HF study

Comin-Colet *et al.* *Eur Heart Journal* 2013



The study appraisal

- Recruitment: 459 patients recruited with iron deficiency, reduced LVEF and NYHA Class II/III
- Allocation: Randomization was achieved using a central Interactive Voice Response System to allocate patients to treatment groups. Patients were randomized in a 2:1 ratio
- Maintenance: Solutions prepared and administered by unblinded physician behind curtain (Patients not able to observe administration). Lab tests done by unblinded personnel, blinded personnel unaware of lab results.
- EQ-5D and KCCQ questionnaires used. Standardised tests but are self-administered and HRQoL is very subjective.



The Results (interpretation of findings)

- The results were presented as percentage changes in questionnaire scores adjusted to baseline and as reporting of minimally important differences in HRQoL during treatment. Deterioration rates were also reported.
- SEM values were minimal from reported values.
- Improvement with iron repletion was significantly greater than placebo in both questionnaires after 4, 12 and 24 weeks of treatment.
- Only HRQoL was considered but this relates directly to our clinical scenario.



The Implications

- Chronic heart failure has marked impact on HRQoL with a current lack of effective therapy.
- Iron deficiency with/without anaemia is a frequent and significant co-morbidity. Indeed, iron deficiency is associated with poorer outcomes and impaired exercise tolerance in CHF.
- This study suggests that iron repletion can be used as an effective therapy for iron-deficient CHF patients to improve HRQoL

