Long term efficacy of single, standardized dose intravenous iron therapy among menorrhagic patients with severe iron-deficiency anaemia

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Introduction

- Intravenous (IV) iron therapy has been well established as an effective, safe treatment for patients with severe iron deficiency anaemia [1]
- Effectiveness of IV iron therapy within 5 weeks post-treatment was also demonstrated in menorrhagic patients [2-3]
- However, it is uncertain for how long the effect of single dose IV iron therapy can last, due to repeated episodes of heavy menses after treatment

Objective

- To evaluate the long term efficacy of intravenous iron in patients with menorrhagia and severe iron-deficiency anaemia

Materials and Method

- Menorrhagic patients with iron-deficiency and haemoglobin level of 6-8g/dL, who received single, standardized dose IV iron therapy (500 mg Ferrous Isomaltoside) between January and December 2020, were included

- Data collection
  - Patient demographics and clinical details, including causes of menorrhagia, current treatment, future management plan, and any blood transfusion in same admission
  - Pre- and post-treatment haemoglobin levels (at 3, 6 & 9 months after IV iron therapy, excluding data after given next dose of IV iron or after hysterectomy)
  - Hypersensitivity reactions

- Statistical analysis
  - Wilcoxon signed-rank test for comparison of non-parametric data
  - p-value of <0.05 taken as statistically significant

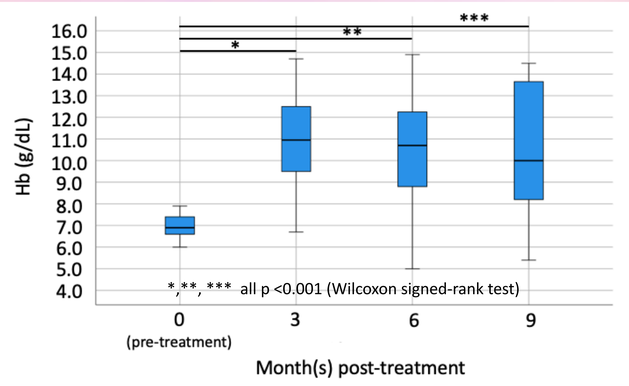
Summary of key findings

- 130 women were included
- Majority suffered from either fibroids and/or adenomyosis (89/130, 68.5%), or dysfunctional uterine bleeding (36/130, 27.7%)
- Mean haemoglobin levels were significantly raised at 3, 6 and 9 months post-treatment (all p <0.001) (Figure 1) , and persistently raised by at least 3 g/dL by 9 months post-treatment (Table 1)
- Hypersensitivity reactions reported in 16 (12.3%) patients, mostly mild reactions such as urticaria. None had severe hypersensitivity reactions
- Drug compliance and long-term treatment plan reviewed in most patients (91% and 96% cases respectively). Drug compliance was reinforced in 23 patients. Alternative second line hormonal treatment or definitive surgery were discussed among 77 patients

Table 1. Rise in haemoglobin level after IV iron treatment compared with baseline

Month(s) post-treatment	Mean (± SD) (g/dL)	Median (g/dL)
3	4.1 (±2.0)	4.0
6	3.6 (± 2.4)	3.8
9	3.5 (± 3.0)	2.9

Figure 1. Comparison between pre- and post-treatment haemoglobin levels



Conclusion

- Single, standardized dose IV iron therapy was a safe treatment for menorrhagic patients with severe iron deficiency anaemia, with good long-term efficacy up to 9 months
- Reviewing the drug compliance and treatment plan when IV iron therapy was given may help to enhance the efficacy of the IV iron therapy

Reference:

1. Auerbach M et al. A prospective, multi-center, randomized comparison of iron isomaltoside 1000 versus iron sucrose in patients with iron deficiency anemia; the FERWON-IDA trial. Am J Hematol. 2019;94(9):1007-1014
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3. Mishra V et.al. Iron Deficiency Anemia with Menorrhagia: Ferric Carboxymaltose a Safer Alternative to Blood Transfusion. *J Midlife Health*. 2018;9(2):92-96