

USE OF INTRAVENOUS IRON IN HEART FAILURE OCTOGENARIANS AND NONAGENARIANS WITH IRON DEFICIENCY

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Background

Anemia is an important comorbidity in heart failure (HF) and iron deficiency (ID) is the commonest contributing factor. Intravenous iron therapy improves quality of life although data in elderly patients is scarce.

Objectives

- To describe use of iron in patients with heart failure and iron deficiency.
- To analyze differences between receiving or not intravenous iron.

Materials and Methods

Retrospective observational study in a University Hospital. January-to-March 2019 Acute Geriatric Unit-admitted octogenarian and nonagenarian patients for unbalanced HF and ID were included.

Registered variables: sociodemographics, length of stay (LOS), Barthel Index, iron oral supplements, use of intravenous iron during admission, analytical parameters at admission and post-discharge, mortality, re-admission at 6 months.

Definitions: anemia (hemoglobin: male, <13.0 g/dL; female, <12.0); ID (ferritin <100 µg/L or 100-299 with transferrin saturation (TSAT) <20%).

Results

Among 89 unbalanced heart failure-admitted patients, 38 were diagnosed of iron deficiency.

	NO INTRAVENOUS IRON n=16 (42.1%)	INTRAVENOUS IRON n=22 (57.9%)	p
Age (years)	87.8 (86.8-89.4)	86.2 (84.0-89.3)	0.261 [±]
Sex (female)	8 (50.0%)	17 (77.3%)	0.080 [¥]
LOS (days)	11 (8-15)	19 (14-24)	0.017 [±]
Barthel Index	77.5 (50-90)	62.5 (50-85)	0.313 [±]
Anemia	9 (56.3%)	16 (72.7%)	0.290 [¥]
At admission			
Oral iron	0 (0.0%)	6 (27.3%)	0.030 [*]
Cockcroft-Gault (ml/min)	29.4 (19.3-38.0)	27.4 (19.7-34.0)	0.301 [±]
Hemoglobin (g/L)	124 (112.5-139.5)	110.5 (107-122)	0.089 [±]
Iron (mcg/dL)	35 (24.5-51.5)	38 (28-43)	0.953 [±]
Ferritin (ng/mL)	119.7 (75.6-190.2)	105.7 (40.4-122.7)	0.178 [±]
Transferrin (mg/dL)	215 (187-235.5)	238 (215-270)	0.044 [±]
TSAT (%)	12.2 (9.5-18.3)	12.15 (8.4-13.6)	0.249 [±]
At discharge			
Oral iron	0/12 (0.0%)	6/18 (33.3%)	0.057 [*]
Cockcroft-Gault (ml/min)	35.14 (28.1-48.9)	28.93 (22.9-34.9)	0.188 [±]
Hemoglobin (g/L)	114 (112-137)	114.5 (113.5-127.5)	0.812 [±]
Iron (mcg/dL)	33.5 (22-47)	70.0 (66.5-94.5)	0.033 [±]
Ferritin (ng/mL)	293.8 (194.4-312.6)	444.5 (313.7-747.0)	0.053 [±]
Transferrin (mg/dL)	200 (151-239)	206.5 (199.5-247.0)	0.420 [±]
TSAT (%)	16.8 (9.6-17)	21 (18.3-36.3)	0.062 [±]
Mortality	4 (25.0%)	4 (18.2%)	0.698 [*]
At 6 months of discharge			
Re-admission	4/12 (33.3%)	7/18 (38.9%)	1.000 [*]
Global mortality	6/16 (37.5%)	10/22 (45.5%)	0.624 [¥]

[±] Median (P25-P75). U-Mann-Whitney-Wilcoxon test. [¥] Chi-square test. ^{*} Fisher's-exact test.

Conclusion

- ✦ In our octogenarians and nonagenarians cohort, 58% of patients received intravenous iron, higher than similar studies.
- ✦ According to guidelines, no oral iron was prescribed, neither during admission, nor at discharge.
- ✦ Intravenous iron increases length of stay, without affecting mortality. However, iron deficiency parameters improve.

References

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