BACKGROUND

• Iron deficiency/anemia (IDA) has been reported as a frequent comorbidity in heart failure (HF) and has been associated with impaired functional capacity, poor quality of life, and increased mortality.1-3

• Nevertheless, little is known about the burden of IDA in HF patients from a healthcare system / payer perspective.

• So far, healthcare utilization—in terms of hospitalisations and outpatient visits, as well as corresponding healthcare expenditures—has not been investigated for HF patients with and without IDA, taking into account the broad spectrum of sectors in a healthcare system.

OBJECTIVES

• This descriptive study explores the demographics, NYHA (New York Heart Association) functional class, healthcare utilization, and costs for HF patients with and without IDA in Germany.

METHODS

• We conducted a retrospective claims database analysis with an age- and gender-adjusted sample from the Health Risk Institute (HRI) research database containing anonymised healthcare claims of over 4 million covered lives.

• The study period spanned from January 1, 2012 to December 31, 2014.

• HF patients were identified using International Statistical Classification Of Diseases And Related Health Problems, 10th revision, German Modification (ICD-10-GM) codes (I50.-) in the inpatient (main or secondary diagnoses) and/or outpatient setting (verified diagnoses) in 2013.

• They were stratified into HF patients without IDA and HF patients with IDA using ICD-10-GM codes (D50., D50.0, D50.8, D50.9, E81.1) or ATC codes for prescribed iron medication (B03A).

• For HF patients without IDA, the index quarter was defined by the first HF diagnosis in 2013.

• For HF patients with IDA, the first quarter in 2013 with either both an HF diagnosis and an iron prescription or both an HF diagnosis and an IDA diagnosis determined the index quarter.

• Patients were described in terms of age and sex at January 1, 2013. They were stratified into NYHA functional classes using the highest NYHA functional class coded in 2013. Patients without recorded NYHA functional class were assigned to the group NYHA n/a.

• Furthermore, HF patients with IDA were stratified into 3 subgroups: no iron treatment, oral iron treatment, and intravenous iron treatment.

• Healthcare utilization and costs were assessed in a 1-year time frame, including the index quarter and the following 3 quarters. Hospitalisations were regarded as HF-related if HF was coded as the main or secondary diagnosis. Outpatient visits were considered to be HF-related if HF was coded as a verified diagnosis in the same quarter.

• The data analysis was performed in cooperation between Xcenda GmbH and Elsevier Health Analytics.

RESULTS

Prevalence

• In total, 172,394 (4.538 per 100,000) HF patients were identified in the HRI research database in 2013.

• Of these, 11.1% were diagnosed with IDA and/or had a prescription for iron medication. IDA alone was documented in only 0.8% of the HF patients.

Demographics and NYHA Classes

• The mean age was 79.1 years for HF patients with IDA and 76.7 years for HF patients without IDA.

• 58.5% of the HF patients with IDA and 54.1% of the HF patients without IDA were female.

• HF patients with IDA presented more often with NYHA classes III and IV (17.8% vs 10.8%) (Figure 2).

CONCLUSIONS

• IDA is a cost driver in patients with HF. HF patients with IDA have higher all-cause mortality and cause higher healthcare utilization and costs.

• Compared to previous findings,1-3 this claims database analysis suggests that IDA is underdiagnosed in the German setting. Especially IDA alone is almost non-existent according to our findings.

• The study revealed that HF patients with IDA are, on average, older and sicker in terms of NYHA classification, with a higher proportion of women than HF patients without IDA. These findings are in line with evidence obtained in other observational studies.1-3

• In addition, the data suggests that IDA in HF patients is undertreated and that intravenous iron is a rarely chosen treatment option in the German setting, despite clinical guidelines suggesting this treatment.1

• Recent studies have shown that treatment with intravenous iron can improve the functional capacity, symptoms, and quality of life in patients with HF and ID.A1

• Therefore, future research should focus on the impact of intravenous iron treatment on healthcare utilization and costs in HF patients with IDA.

LIMITATIONS

• In general, claims data analyses are subject to limitations, as they are primarily collected for accounting purposes, and therefore clinical parameters are not covered.

REFERENCES


