Adherence to guideline-recommended drug therapy in patients with chronic heart failure

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Aim of the study: Evaluation of guideline-conform treatment and its impact on hospital readmissions and mortality in our patient population

Patients and methods:
Based on claims data from the 13 bigger Austrian health insurance funds,

- hospitalised patients for whom a discharge diagnosis of chronic heart failure had been reported between January 1, 2015 and December 31, 2015 were included.
- As an approach towards guideline-recommended therapy, data on drugs prescribed within one year after this discharge were analysed and patients were assigned to 3 therapy groups:
  - **Group 1:** Patients, who received angiotensin-converting enzyme inhibitors (ACE-I) or angiotensin receptor II blockers (ARB) and beta blockers (BB),
  - **Group 2:** Patients with ACE-I/ARB or BB or aldosterone antagonists (AA) and
  - **Group 3:** Patients with none of the above-mentioned drug classes
- Multivariate Logistic Regression was performed to explore the relationship between drug therapy (therapy group), age groups, hospital readmission rates and mortality

Results:
- 19 314 patients (46.8 % male) were included with a mean age of 79.2 ± 11.5 years
- **Prescribed therapy/therapy group:** 36 % ACE-I/ARB and BB (Group 1), 50 % ACE-I/ARB or BB or AA (Group 2) and 13 % of patients with none of these (Group 3) (see Figure 1)
- **Hospital readmission**: overall readmission rate: 27.1 %; average number of hospital stays within one year: lowest within group 3 (no prescription for any of the considered drug classes), but time between discharge and rehospitalisation is also significantly lower in this group (Figure 2)
- **Mortality:** Multivariable logistic regression analysis revealed that the prescription of ACE-I/ARB in combination with beta-blockers (Group 1) lowers the mortality risk (OR 0.3) compared to patients without any prescription for the considered drug classes (Group 3), also patients, who received ACE-I/ARB or BB or AA (Group 2) had a lower mortality risk than patients in Group 3 (see also Kaplan-Meier survival curves in Figure 3).

Figure 1: Prescribed therapy first year after discharge (%)

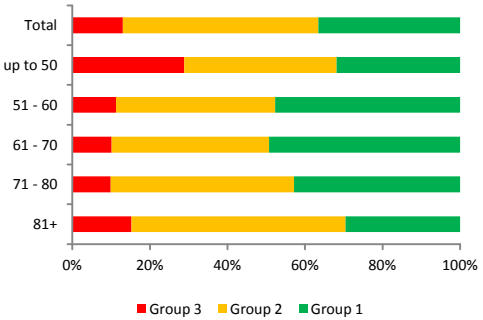


Figure 2: Rehospitalisations within one year according to therapy group

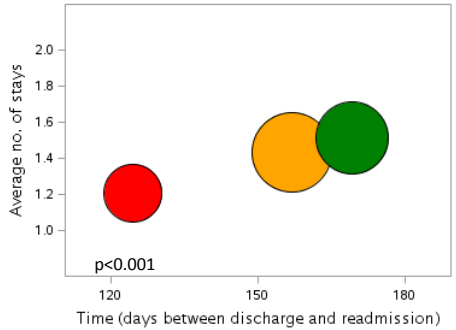
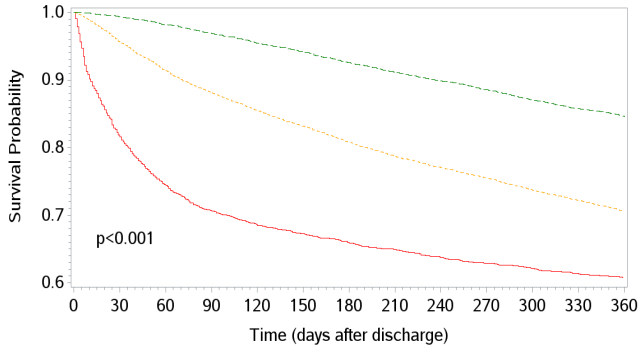


Figure 3: Kaplan-Meier survival curves for patients according to treatment group



Conclusion: A combination of ACE-I/ARB with beta-blockers has a beneficial impact on mortality. Unfortunately, this therapy remains underutilised in our population.