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Physicians and patients adherence to guidelines is associated with better prognosis in patients with heart failure: insights from the Optimize Heart Failure Care Program

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Background: Physician-related and patient-related factors play an important role in the suboptimal implementation of heart failure (HF) guideline-recommended therapy into real clinical practice. The aim of this study was to evaluate the impact of physicians' and patients' adherence to guideline-recommended therapy on all-cause death and HF re-hospitalization rates in patients with HF.

Methods: This study was part of the international multicenter Optimize Heart Failure Care Program. 635 patients (mean age 61.6±12 years, 72% male, 75.6% with sinus rhythm) hospitalized with decompensated HF, NYHA II-IV (mean 2.8±0.6), mean LVEF 33.6±9.1%, were included. To assess physicians' adherence to the medications recommended by the 2016 ESC HF guidelines, a five-class guideline adherence score for angiotensin converting enzyme inhibitors (ACEIs), beta-blockers (BBs), angiotensin receptor blockers (ARBs), mineralocorticoid receptor antagonists (MRAs), and ivabradine was used. The score was calculated for each patient by summing up points, which were attributed as follows: 0 for non-prescription in the absence of specified contraindications, and one point each for the use of ACEIs, ARBs, BBs, MRAs, and ivabradine if indicated. Patients' adherence to recommended medications was assessed using a method based on patient-reported compliance. Adherence was classified as good if patients always took all prescribed medications at target doses, moderate if sometimes patients didn't take one class of medications or took them at suboptimal doses, and poor if patients did not take any of the prescribed medications.

Results: The prescription rates of ACEIs/ARBs, BBs and MRAs were 91%, 84% and 86%, respectively. Ivabradine was prescribed in 36% of patients with HF and sinus rhythm. However, the doses of medications were suboptimal in most HF patients. In the group of good physician adherence (n=224), 114 patients (51%) demonstrated good adherence, 95 (42%) moderate adherence (398 patients), and only 15 (7%) poor adherence. In the group of moderate physician adherence only 88 patients (22%) took medications as prescribed, 266 patients (66%) showed moderate compliance and 44 patients (12%) did not take all prescribed medications. The rate of all-cause mortality was significantly lower in the group with good both physician and patient adherence (2.2%, $p<0.0001$) compared with the groups of moderate or poor physician' adherence and poor patient' adherence (19% and 21%, respectively). After 12 months of follow-up the rates of

all-cause mortality and HF re-hospitalization were significantly higher in all three groups of physicians' adherence when patients' adherence was poor (HR 2.7, 95% CI 1.8–3.4, p=0.0001) (Figure).

Conclusion: Regardless of the physicians' guidelines adherence, poor patients' adherence plays a crucial role for worth prognosis and higher rate of HF re-hospitalization in HF patients. New educational initiatives are warranted to optimize HF treatment.

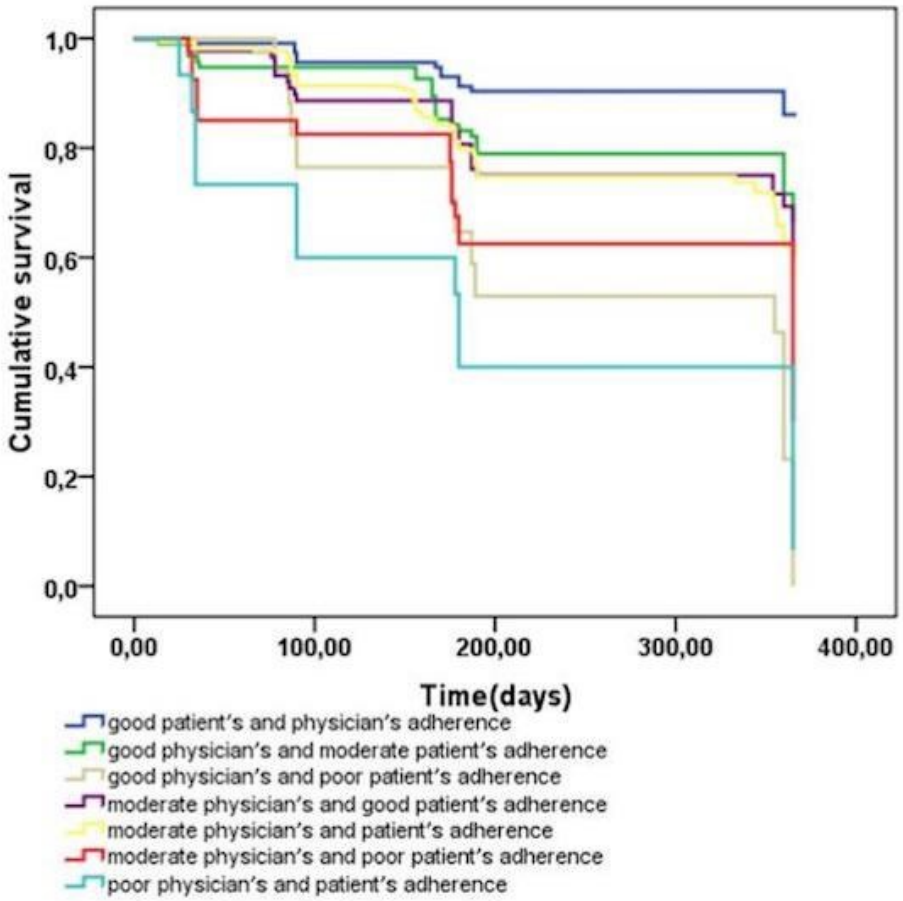

Figure 1