Outcomes of adherence to guideline in heart failure management: the role of heart failure specialist

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Topic(s):
Chronic Heart Failure: Pharmacotherapy

Citation:
Background: Heart failure (HF) is a chronic disease that affects millions of people every year and associated with high levels of mortality and morbidity worldwide. The adherence to guidelines in treating HF patients is an important predictor of their clinical worsening.

Purpose: is to evaluate the level of adherence to ESC guidelines in the management of HF patients in a tertiary care center in Lebanon, as well as assessing the impact of poor adherence on mortality and readmission after a 1-year follow-up period. This study also aims to evaluate the role of a HF-specialist in implementing these guidelines.

Methods: This study is using a prospective longitudinal design, targeting 165 adult HF patients, with ejection fraction <40%, who are being recruited from a tertiary care center. Therapeutic data were collected at discharge and then after 1 year for readmission and death. We computed a Guideline Adherence Indicator-3 (GAI3) for the three evidence-based HF medications; angiotensin converting enzyme inhibitor (ACEI)/angiotensin receptor blocker (ARB)/angiotensin receptor neprilysin inhibitor (ARNI), beta-blocker (BB), and mineralocorticoid receptor antagonist (MRA). Subjects were divided into three groups; those with low adherence (GAI3=0/3 or 1/3), moderate adherence (GAI3=2/3), or perfect adherence (GAI3=3/3), and then divided based on their treating physician into HF-specialist versus non-HF specialist. Survival analyses were used to compare between endpoints and guideline adherence levels.

Results: The mean age of our sample was 64.62±15.32. In total, 73.5% were males, 55.8% had moderate ejection fraction (30-39%), and 54.5% had a history of coronary artery disease. The adherence to drugs at discharge was 90.3% for ACEI/ARB/ARNI, 89.7% for BB, and 58.2% for MRA. The overall baseline adherence GAI3 was 48.5%. The level of adherence was perfect in 48.5% of patients, but moderate and low in 43.0% and 8.5% respectively. Log rank test showed a significant difference in event-free survival rate of mortality after 1 year (95.2% versus 60.0%, log rank p=0.048) and readmission for HF exacerbation (76.2% versus 40.0%, log rank p=0.038) between perfect and low adherence levels. After comparing patients followed up by a HF specialist versus a non-HF specialist, we found a significant difference in adherence to ACEI/ARB/ARNI (97.1% versus 86.3%, p=0.017) and to MRA (77.1% versus 44.2%, p<0.001), but not for BB (94.3% versus 86.3%, p=0.096). Similarly, for the GAI3 levels, there was a significant difference in the guideline adherence levels between HF-specialist and non-HF specialist (p<0.001).

Conclusion: The more adherence to guidelines in HF management is associated with better patients’ clinical outcomes. There is a major need for referring patients to a HF specialist before reaching the advanced HF stage.
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