



EDITORIAL COMMENT

An approach to improving heart failure management – A local contribution[☆]



Perspetiva para a melhoria do tratamento da insuficiência cardíaca – um contributo local

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Heart failure (HF) is a growing public health problem. Around 26 million individuals worldwide now suffer from HF, a similar figure to the 32 million who are living with cancer and the 34 million around with HIV/AIDS.¹ The estimated prevalence of HF in Europe is 2%, and rises sharply after the age of 60; over 80% of HF patients are aged ≥ 65 years, and it is the leading cause of hospitalization in this age-group, in both Europe and the US.²

The number of HF patients is expected to double by 2030 due to aging populations and to more effective treatment of HF and of the heart diseases that lead to it, which will inevitably increase demands on medical services and health institutions.³

At the same time, the epidemiology of HF appears to be changing. A recent systematic review reported that its prevalence among individuals aged ≥ 60 years is 11.8%, which has remained fairly stable in the last decade, and that HF with preserved ejection fraction (HFpEF) is more common than HF with reduced ejection fraction (HFrEF) (4.9% and 3.3%, respectively), the prevalence of the former increasing and that of the latter apparently decreasing in the 21st century.⁴

Despite advances in the last 30 years in new pharmacological and non-pharmacological therapies that can effectively treat HFrEF, HF patients are at high risk of early rehospitalization and death after a first admission, especially in the first 30-60 days after discharge. Around a quarter of HF patients aged >65 will be readmitted within 30 days and a half within six months of discharge.⁵⁻⁷ HF has a drastic effect on survival and the quality of life of patients and caregivers and on the health budgets of developed countries. It is estimated that costs will rise two and a half times by 2030,³ and hospitalizations account for 60-80% of expenditure on HF.

However, it is acknowledged that most readmissions could be avoided through improvements in hospital care, particularly pre-discharge, and transitional care.^{3,6,8-11} Against this background, under the scope of a program to reduce readmissions in American hospitals, excessive readmission rates have been subject to financial penalties since 2010. Other countries have opted to reward institutions with better indicators.

HF treatment should also be a priority of the Portuguese national health system, at all levels of care.¹² Everyone – patients, health professionals and decision-makers – should be made more aware of the syndrome and take measures to deal with the epidemic in all its aspects.

Rather than punitive measures, the strategy should be based on ongoing clinical research, multicenter national registries and real-life data, which are essential to establishing evidence-based quality indicators and standards that can

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measure improvements in morbidity and mortality among HF patients.

The study by Marques et al. in this issue of the *Journal* is part of this effort.¹³ The authors analyze a population of consecutive patients hospitalized in the internal medicine department of a tertiary teaching hospital that is planning to implement an HF clinic based on a multidisciplinary approach to improving the care provided to HF patients.

HF clinics based on integrated management of the syndrome by multidisciplinary teams have been shown to reduce morbidity and mortality and are a class IA recommendation in the European Society of Cardiology guidelines on the treatment of acute and chronic HF (ESC).¹⁴

Aware that there is no single one-size-fits-all model, since local needs differ, the authors seek to assess deficiencies and identify areas for improvement.

We highlight certain results of the study that are of particular interest. The patients admitted to the internal medicine department were elderly (mean age 79 years), and the majority were women (62.5%), with multiple comorbidities (not all of which were assessed in the study), and mainly had HFpEF (70.5%). The subjects were thus different from those included in clinical trials and registries from cardiology departments and HF units in Portugal and other European countries, who are generally younger, mainly male and with HFrEF.^{15,16} The characteristics of the study population were thus more in line with those reported by many other studies, in which older HF patients with multiple comorbidities and preserved ejection fraction, are more often admitted to internal medicine departments.

A third of the patients died or were rehospitalized within a year, evidence that the long-term prognosis of HFpEF is as poor as that of HFrEF, and belying the myth that the former has a better prognosis.^{17,18} In-hospital mortality (7.9%) was as high for HFpEF as for HFrEF, as was the one-year readmission rate (34.3%), which is also higher than that reported in the ESC Heart Failure Long-term Registry, suggesting there is room for improvement.¹⁹

Reassessment following discharge in specialist consultations (only available for 62% of patients over a period of one year) was late, well after the two weeks recommended in international guidelines. There is no mention of assessment in primary care, which is also recommended within a week of discharge in the ESC guidelines.¹⁴

Even though hospitalization is an undesirable event and represents a worsening of the clinical course of HF, it does offer a unique opportunity to reassess the patient and optimize therapy, but this is only the first step. The guidelines recommend referral of these high-risk patients to an integrated management program, but only 26 countries in Europe have such programs in more than 30% of their hospitals, and even when they do exist, they are not always properly used.^{14,20} Various levels of care, especially primary care, need to be included in the multidisciplinary management of these patients, a measure that has yet to be fully implemented in Europe, including Portugal.¹⁴

It is tempting to assume that differences in mortality and rehospitalization rates between different European countries, which are lower in Northern Europe and in certain southern European countries like Italy, are related to the level of access to integrated HF management networks

and programs that have long been implemented in these countries.²⁰⁻²³

The introduction of such programs should be encouraged, and we therefore eagerly await the results of the HF clinic that Marques et al. are proposing to implement in their hospital.

We agree that there is a need for studies and multicenter national registries that include cardiology departments as well as internal medicine, geriatric and emergency departments, in order to characterize the HF pandemic more thoroughly and to implement national HF treatment networks that meet patients' needs. Organizational efforts will be required at both local and national level.¹² The time has come to share experiences and coordinate initiatives to raise awareness, improve training, and implement an organizational strategy and policies to improve HF treatment in Portugal.¹²

Conflicts of interest

The author has no conflicts of interest to declare.

References

1. Ambrosy AP, Fonarow GC, Butler J, et al. The global health and economic burden of heart failure: lessons learned from hospitalized heart failure registries. *J Am Coll Cardiol*. 2014;63:1123-33.
2. Mozaffarian D, Benjamin EJ, Go AS, et al. Heart disease and stroke statistics - 2015 update: a report from the American Heart Association. *Circulation*. 2015;131:e29-322.
3. Heidenreich PA, Albert NM, Allen LA, et al. Forecasting the impact of heart failure in the United States: a policy statement from the American Heart Association. *Circ Heart Fail*. 2013;6:606-19.
4. van Riet EE, Hoes AW, Wagenaar KP, et al. Epidemiology of heart failure and ventricular dysfunction in older adults over time. A systematic review. *Eur J Heart Fail*. 2016;18:242-52.
5. Heidenreich PA, Sahay A, Kapoor JR, et al. Divergent trends in survival and readmission following a hospitalization for heart failure in the Veterans Affairs health care system, 2002 to 2006. *J Am Coll Cardiol*. 2010;56:362-8.
6. Desai AS, Stevenson LW. Rehospitalization for heart failure. Predict or prevent? *Circulation*. 2012;126:501-6.
7. Chen J, Ross JS, Carlson MD, et al. Skilled nursing facility referral and hospital readmission rates after heart failure or myocardial infarction. *Am J Med*. 2012;125, 100-e1-9.
8. Kociol RD, Peterson ED, Hammill BG, et al. National survey of hospital strategies to reduce heart failure readmissions: findings from the Get with the Guidelines-Heart Failure registry. *Circ Heart Fail*. 2012;5:680-7.
9. Cowie MR, Lopatin YM, Saldarriaga C, et al. The Optimize Heart Failure Care Program: initial lessons from global implementation. *Int J Cardiol*. 2017, <http://dx.doi.org/10.1016/j.ijcard.02.033> [in press].
10. Madigan EA, Gordon NH, Fortinsky RH, et al. Rehospitalization in a national population of home health care patients with heart failure. *Health Serv Res*. 2012;47:2316-38.
11. van Walraven C, Bennett C, Jennings A, et al. Proportion of hospital readmissions deemed avoidable: a systematic review. *CMAJ*. 2011;183:E391-402.
12. Fonseca C, Brito D, Cernadas R, et al. Pela melhoria do tratamento da insuficiência cardíaca em Portugal - documento de consenso. *Rev Port Cardiol*. 2017;36:1-8.

13. Marques I, Abreu S, Bertão MV, et al. Characteristics and outcomes of heart failure hospitalization before implementation of a heart failure clinic: the PRECIC study. *Rev Port Cardiol.* 2017;36:431–8.
14. Ponikowsky P, Voors AA, Anker SD, et al. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC). Developed with the special contribution of the Heart Failure Association (HFA) of the ESC. *Eur Heart J.* 2016;37:2129–200.
15. Fonseca C, Araújo I, Marques F, et al. A closer look at acute heart failure: putting Portuguese and European data in perspective. *Rev Port Cardiol.* 2016;35:291–304.
16. Maggioni AP, Anker SD, Dahlstrom U, et al. Are hospitalized or ambulatory patients with heart failure treated in accordance with European Society of Cardiology guidelines? Evidence from 12,440 patients of the ESC Heart Failure Long-Term Registry. *Eur J Heart Fail.* 2013;15:1173–84.
17. Desai AS, Claggett B, PfefferMA, et al. Influence of hospitalization for cardiovascular versus noncardiovascular reasons on subsequent mortality in patients with chronic heart failure across the spectrum of ejection fraction. *Circ Heart Fail.* 2014;7:895–902.
18. Schmidt M, PilgaardUlrichsen S, Pedersen L, et al. Thirty-year trends in heart failure hospitalization and mortality rates and the prognostic impact of co-morbidity: a Danish nationwide cohort study. *Eur J Heart Fail.* 2016;18:490–9.
19. Crespo-Leiro MG, Anker SD, Maggioni AP, et al., on behalf of the Heart Failure Association (HFA) of the European Society of Cardiology (ESC). European Society of Cardiology Heart Failure Long-Term Registry (ESC-HF LT): 1-year follow-up outcomes and differences across regions. *Eur J Heart Fail.* 2016;18:613–25.
20. Seferovic PM, Stoerk S, Filippatos G, et al. Organization of heart failure management in European Society of Cardiology member countries: survey of the Heart Failure Association of the European Society of Cardiology in collaboration with the Heart Failure National Societies/Working Groups. *Eur J Heart Fail.* 2013;15:947–59.
21. Tavazzi L, Senni M, Metra M, et al. Multicenter prospective observational study on acute and chronic heart failure: one-year follow-up results of IN-HF (Italian Network on Heart Failure) outcome registry. *Circ Heart Fail.* 2013;6:473–81.
22. Strömberg A, Martensson J, Fridlung B, et al. Nurse-care heart failure clinics improve survival and self-care behaviour in patients with heart failure. Results from a prospective, randomised trial. *Eur Heart J.* 2003;24:1014–23.
23. McDonagh TA, Blue L, Clark AL, et al. European Society of Cardiology Heart Failure Association Standards for delivering heart failure care. *Eur J Heart Fail.* 2011;13:235–41.