

Care plans for the older heart failure patient

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Heart failure (HF) professionals are managing an older population with multiple, often interconnected comorbidities. The average age of the HF patient has increased substantially and many have a number of comorbidities. For the older HF patient, diligent planning of care has the potential to reduce hospitalization, improve quality of life and mortality; nevertheless, this vital component is often overlooked. Frailty, cachexia, sarcopenia, and cognitive impairment are all common in the older HF patient and require special care considerations. Many older HF patients live for many years with troublesome symptoms that could be better addressed through the incorporation of a palliative approach to care. Effective care plans can help patients maximize their health potential through both lifestyle and pharmacological interventions. However, current evidence remains scarce on what constitutes an optimal plan, therefore further studies are urgently needed. We review the care that could be implemented for the complex older HF patient with comorbidities.

Introduction

It is evident within daily clinical practice and the recent design of patient-centred trials, heart failure (HF) professionals are managing an older population with multiple, often interconnected comorbidities.¹⁻⁶ Over the last decade, the average age of the HF patient has increased from 76 to 77 years,⁷ with many living with at least four comorbidities.⁸⁻¹⁰ In the American OPTIMISE-HF registry, post-discharge mortality increased by 22% for every 10-year increase in age.¹¹ In parallel to an ageing population, there is growing pressure on limited healthcare resources, in terms of finance, personnel, and place of care. For the older HF patient, diligent planning of care has the potential to reduce hospitalization, improve quality of life and mortality,^{12,13} nevertheless, this vital component is often overlooked.

Frailty *et al.*

A number of conditions have become associated with the older HF patient, for example frailty,¹⁴ cachexia,¹⁵

sarcopenia,^{16,17} and cognitive impairment including dementia, however, these illnesses can also occur independent of age.¹⁸ Cachexia and sarcopenia are syndromes associated with unintentional weight loss; cachexia is frequently linked to cancer and end-stage HF, whereas sarcopenia is primarily considered a disease of the elderly. When present sarcopenia can, however, secondarily worsen integrated cardiovascular function.¹⁹ In a recent prospective study (SICA-HF) including 207 ambulatory male chronic HF patients, 18.8% had cachexia, 14.4% had sarcopenia, and 6.7% had both.²⁰ Frailty has recently been defined by an Heart Failure Association of the European Society of Cardiology (HFA of ESC) committee as a *multidimensional dynamic state, independent of age, that makes the individual with HF more vulnerable to the effect of stressors*.⁸ Almost half of older HF patients experience frailty,²¹ which can occur in tandem with cachexia/sarcopenia.²² Studies show the detrimental impact these syndromes have on patient outcomes with reduced physical function, poor quality of life and ominous prognosis.²³⁻²⁵ Many older HF patients live for many years with troublesome symptoms that could be better addressed through the incorporation of a palliative approach to care.²⁶ Effective care plans can

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help patients maximize their health potential through both lifestyle and pharmacological interventions. However, current evidence remains limited on what constitutes an optimal plan,²⁷⁻³⁰ therefore further studies are urgently needed. Most randomized clinical trials have excluded complex elderly patients with comorbidities, an approach that needs to be addressed within future trials.^{31,32}

Currently, frailty, cachexia,³³ and sarcopenia²⁰ all remain poorly diagnosed in routine clinical practice, due to a lack of clinically appropriate and validated tools.³⁴⁻³⁶ There is also the possibility of misdiagnosis, hence a common-sense approach is required. For example, in the case of a patient who presents with symptoms of nausea and/or anorexia, a holistic assessment may uncover causative factors of medications (e.g. digoxin), ascites or a gastrointestinal complaint. A consensus definition of cachexia³⁷ aimed to improve the diagnosis of the syndrome, however, there remains a current need to provide a validated assessment tool to enable the earlier identification of 'pre-cachexia'.^{38,39} Furthermore, the HFA/ESC statement supports the urgent need for a validated tool for the identification and assessment of frailty.⁸

Treatment approaches

Dietary information and nutritional advice may help mitigate weight loss and improve exercise tolerance and thereby quality of life. Increasing protein and calorie intake, for example via taking nutritional and vitamin supplementation or appropriate dietary advice have been shown to be beneficial.⁴⁰⁻⁴³ Input from a dietician should be considered to offer advice focused on tailored meal plans.⁴⁴ ESC guidelines⁴⁵ recommend that HF patients should avoid excessive salt intake (>6g/day), however supportive evidence remains limited,⁴⁶ particularly for the older HF patient. Other approaches show potential for future advances.^{47,48}

Regular exercise is a Class 1, level A recommendation for all HF patients,^{24,49} which for the older patient may relate to engagement in some level of physical activity where possible.^{50,51} Frailty,^{52,53} as well as comorbidities such as arthritis may make this more challenging, therefore appropriate physical support (i.e. walking aid, well-fitted shoes) may be appropriate, particularly if the patient is prone to falls. Cardiac rehabilitation offers an ideal environment to assess and motivate patients to undertake a regular exercise regimen. A number of cardiac rehabilitation programmes include physiotherapists, enabling tailored advice to patients' abilities and needs. An exemplar programme is the Cachexia and Fatigue Management Programme, which includes a high protein intake, use of an anti-inflammatory agent and tailored resistance exercise programme to counteract muscle wasting and fatigue.⁵⁴ Future large-scale studies should evaluate the impact of multimodal interventions to facilitate improvements in patient outcomes. In addition, future novel programmes may be developed to support conventional exercise training.^{55,56}

Other approaches

For the older HF patient, there is an increased likelihood of cognitive decline as a result of the condition and the ageing

process itself. It is therefore vital the patient's next of kin and or family members are involved in critical discussions and decision-making. Informal caregivers play a crucial role in promoting the patient's self-care, medication adherence and well-being, resulting in a positive impact on quality of life and rehospitalizations.^{57,58} Support and involvement of a social worker in the patient's care may be required. Furthermore, with the growing evidence to support the use of telemedicine⁵⁹⁻⁶² more supportive care can be provided in the patient's home; this being dependent on the acceptability of the patient to the use of this technology.

Many older HF patients are on multiple prescribed medication, due to their co-existing comorbidities.⁶³ Information should be provided, alongside practical tools, such as a blister pack, alarm reminders to take medications in order to promote independence and adherence with medications.⁶⁴ Collaboration with the community pharmacist and/or healthcare professional will enable monitoring of adherence, which has been shown to be a major factor in negative patient outcomes.⁶⁵

Resources are lacking to recognize and effectively plan and implement the care of these more complex elderly patients. Given the debilitating nature of the symptoms many patients would benefit from early integration of palliation into HF management.⁶⁶⁻⁶⁸ Undoubtedly, this is a cohort of often overlooked patients, requiring further attention and research to ensure we are providing effective treatments and care.

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