advanced heart failure (AHF) referred for consideration of ventricular assist device (VAD) implantation and/or heart transplantation (HTx).

Since 2013, when possible all AHF patients referred to our centre have been assessed for frailty. Fried's five physical domains – exhaustion, grip-strength, mobility, appetite and physical inactivity (frail $\geq 3/5$), as well as cognitive impairment (MoCA ≤ 26) and depression (DMI > 9) were assessed.

We have demonstrated that frailty is associated with increased mortality in patients with AHF^{2,3} and increased morbidity and mortality after VAD implantation and after heart transplantation.⁴

Despite the increased morbidity and mortality post-intervention, physical frailty is reversible in the majority of patients undergoing bridge-to-transplant VAD implantation and HTx. Of the individual frailty domains, change in hand-grip strength is the least sensitive indicator of improved frailty status.

Future goals or challenges in frailty research in the setting of AHF include the development of a universally accepted frailty measurement, the development of measures that distinguish reversible from irreversible frailty, and the role of prehabilitation in reducing frailty-associated morbidity and mortality after VAD or HTx.

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TRANSITIONAL STATES IN FRAILTY: IMPLICATIONS FOR END OF LIFE SUPPORT IN HEART FAILURE

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The frailty syndrome is defined as the loss of reserve in multiple physiological systems that occur with ageing. Frailty can result in vulnerability to any minor disturbances and exposes older adults to an array of adverse health outcomes such as falls, fractures, hospitalisations, and mortality. The most common phenotype associated with frailty is sarcopenia, the age-related loss of skeletal muscle mass and function. The heart is a muscular structure, yet we do not understand whether the decline in cardiac function in old age is directly related to sarcopenia. However, there has recently been increasing interests in the correlation between heart failure and frailty status. Moreover, frailty is a reversible process. Overseas and local data have confirmed that up to a quarter of those in the pre-frail status can revert to the robust state. This presentation is focused on the evidence in reversing frailty, and examines options in improving the function of older heart failure patients.

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WHEN IS IT TIME TO SWITCH THE ICD OFF IN A HEART FAILURE PATIENT?

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It is well documented that implantable cardioverter defibrillator (ICD) saves lives in populations at risk for sudden death. However, mortality in advanced heart failure remains high despite advances in therapy.¹ Twenty per cent of ICD patients receiving shocks in the final weeks of their lives experience pain and decreased quality of life, causing distress to patients and their families.² Ethically and legally, there are no differences between refusing ICD therapy and requesting withdrawal of ICD therapy. Carrying out a request to withdraw life-sustaining treatment is neither physician-assisted suicide nor euthanasia.³ Decisions about deactivation of ICD are complicated. Proactive communication by clinicians before implant and during device follow-up are important in order to minimise suffering as the end of life nears for patients with ICDs. Clear discussion about the benefits and burdens of the device should be made. Advance care planning addressing device deactivation should be encouraged for all patients with ICD.⁴

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11

HOSPICE AND PALLIATIVE CARE FOR ADVANCED CARDIAC DISEASES IN HONG KONG

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Advanced cardiac diseases are common non-cancer conditions that require good palliative care. Palliative Care should embrace both cancer and non-cancer conditions, and is applicable early in the course of illness, in conjunction with other therapies. There is a high prevalence of symptoms and distress in heart failure (HF) necessitating palliative care, which include not just dyspnoea and oedema but also a range of other symptoms that are all sub-optimally controlled at the end of life.¹

For patients with HF, palliative care attends to physical, psychological, social and spiritual distress, caring for both patients and families with optimisation of quality of life.² Palliative care also facilitates communication and complex decision-making with advance care planning. Palliative support should be offered once there is a need. Prognostic indicators