EDITORIAL

Heart Failure Paradigms in the Developed World - A Reflection - Part 1

In this thematic series, we covered the topic of Heart Failure (HF) within the context of changing paradigms from the generating of evidence to the translation into clinical practice. The theme acknowledges the necessity of new innovations but also highlights the importance of consolidating and implementing established evidence.

The term HF references 'a syndrome'; however, today, there are sufficient advancements so that 'a disease label' can probably be used for some HF phenotypes. Following early observational and population studies, subsequent research has targeted specific questions and has often delivered definitive findings including the following: 1) epidemiology, noting the high disease burden of morbidity and mortality and the associations comorbid conditions; 2) diagnostic tools and systems of classification, which have been more robust for heart failure with reduced systolic function ((HFrEF); and 3) therapeutics, including pharmacological interventions, device therapies and systems of care for reducing mortality, reducing hospitalisations, improving functional capacity, improving quality of life and reducing costs of care [1, 2].

Despite these tremendous achievements, there still remain obvious gaps when outcomes are measured at a broader or global level. 'Real-world' heterogeneity, outside of trial inclusion criteria, and the need to extrapolate findings to a wider community, have proved challenging [3]. Thus, one of the current challenges is not only to introduce novel treatments, but to broaden translational paradigms for achieving cost-effective outcomes in all HF populations.

There are now multiple interventions that have been shown to improve outcomes in HF patients. The order in which these have been added has been historical in sequence. However, clearly there is patient-specific granularity that should determine the order in which these agents or devices are introduced, not purely adding one after another in historical order. More recently introduced therapies such as sodium-glucose cotransporter 2 inhibitors and neprilysin inhibitors (with angiotensin receptor blockade) are likely to move up the potential treatment cascade but not at the expense of downplaying the crucial role of beta-blockade and mineralocorticoid receptor antagonism. In addition, not all novel diagnostic and monitoring measurements, such as global longitudinal strain and Doppler measurements are broadly available, let alone the continuous monitoring of pulmonary artery pressures. Not all practitioners have funded access to routine monitoring using serum natriuretic peptides.

In designing the most robust models of care, it is important to align the perspectives of patients, medical care-givers, administrators and payers. New interventions need to be cost-effective in their application. They also must vary, depending on the needs of specific populations and care provision systems [4].

Whilst extremely important, heart failure with persevered ejection fraction (HFpEF), generally accounting for about half of all HF cases and HF hospital admissions, has greater definitional and treatment gaps, and is not included in the range of topics for this series.

In this first part of the series, reviews cover the process of care in HF, common comorbidities, diagnostics, and surgical considerations [5-9]. The second part covers technology-based management, cardiac morphology, concepts of risk scoring, and future considerations within these themes. Whilst the topics covered in the two parts are clearly not a comprehensive cover of the extensive knowledge base for HF, we believe that they make a useful contribution to the understanding of some current issues.

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