EDITORIAL COMMENT

Multiple Chronic Conditions and Heart Failure
Overlooking the Obvious?*

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“Facts do not cease to exist because they are ignored.”
—Aldous Huxley (1)

The overwhelming majority of patients with heart failure (HF) are older adults with multiple chronic conditions (MCC). If you doubt this fact, open the electronic chart of any hospitalized patient with HF or listen to the presentation of a medical student or intern on rounds, and you will be greeted by a laundry list of diagnoses, comorbid conditions including affective and cognitive disorders, and hopefully mention of functional capacity, juxtaposed with the chief concern. Indeed, in the large population of Medicare beneficiaries, more than two-thirds (68%) of those with cardiovascular disease (CVD) have ≥2 chronic conditions (2), whereas the data presented by Murad et al. (3) in this issue of JACC: Heart Failure demonstrate that 60% of subjects with incident HF had ≥3 chronic conditions. Not surprisingly, the most common chronic condition is MCC, which is tightly tied to the aging of the U.S. and worldwide populations. However, what is surprising is that the health care delivery system routinely fails to account for this complexity. Rather, most providers think in terms of index diseases and do not fully account for their patients’ multimorbidity (4).

Multimorbidity in HF is particularly pernicious (~40% of Medicare patients with HF have ≥5 noncardiac comorbidities), and the risk of hospitalization and potentially preventable hospitalization strongly increases with the number of chronic conditions (5). Geriatric conditions (e.g., dementia and mobility impairment) and other MCC are among the top predictors of mortality in patients with HF, and the increased odds for mortality associated with these conditions far exceed those associated with more traditional cardiovascular risk factors, such as blood pressure, left ventricular ejection fraction, and prior HF (6).

Murad et al. (3) report on the prevalence of 9 comorbidities and 4 measures of functional and cognitive impairments in participants with incident HF from the Cardiovascular Health Study. These data add to the aforementioned studies and others that have investigated comorbidities and functional and cognitive impairments in patients with prevalent HF by delineating the prevalence of MCC in patients before the diagnosis of HF and their impact on outcomes after HF diagnosis. The data demonstrated that some (diabetes mellitus, chronic kidney disease, cerebrovascular disease, depression, and functional and cognitive impairments) but not all (hypertension, coronary heart disease, atrial fibrillation, and obstructive airway disease) MCC were associated with mortality after HF diagnosis. Of note, many of the nonmedical comorbidities, including self-reported health status, impaired activities of daily living (ADLs), and cognitive function, were as predictive of mortality as many of the medical comorbidities.

Although these data fill an important gap in knowledge, some questions remain. The choice of all-cause mortality as a primary outcome does not delineate the effects of multimorbidity on functional

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status and disability, outcomes often of equal or greater importance to older adults with HF. Indeed, further analysis using ADLs as an outcome rather than a predictor would have determined the impact of MCC on active life expectancy (7). Previous research suggests that combinations of chronic conditions—including HF, depression, and cognitive impairment—have synergistic effects on ADLs and instrumental ADLs (e.g., patients with HF and depression performed 2 fewer ADLs than patients with neither condition vs. 1.3 fewer ADLs expected from simply adding the effects of the 2 conditions together) (8). Identification of additional combinations of MCC in HF that drive adverse outcomes in this population would also inform clinical care.

The importance of MCC in older adults with CVD was recently the focus of an American College of Cardiology/American Geriatrics Society/National Institute on Aging Workshop (U13AG047008) held at Heart House February 9 and 10, 2015. The overarching goals of the Workshop were to identify unmet needs, formulate a research agenda, and discuss strategies for translating new research findings into clinical practice, ultimately leading to improved patient-centered care and outcomes for the growing population of older adults with CVD and MCC (9). Research in this arena is lacking, and emerging from this conference was a need for basic science studies examining the mechanisms linking aging, frailty, CVD, and MCC; cohort studies that evaluate the impact of MCC on clinical care and outcomes, including patient-centered outcomes in older adults with CVD, development of a set of elder-core elements that could be included into clinical care, and registries and clinical trials; comparative-effectiveness studies in older adults examining various treatments, including nonpharmacologic therapies and lifestyle interventions; and development and testing of interventions to assist clinicians in refocusing care from a conventional disease-based approach to a patient-centered, goal-directed care, especially in older adults with MCC and CVD and others.

In the absence of robust data, what skills will be needed by practicing clinicians to provide optimal care for an individual patient with HF and MCC? Because neither geriatric conditions nor HF is “curable,” a focus on what is important to the patient (by delineating patient-centered outcomes), which often involves optimizing function and relieving burdensome symptoms, will be of paramount importance. For example, physical therapy may improve mobility, and increased social support can be fostered to help patients’ medication adherence (6). Incorporating into routine assessments and management the measurement of geriatric conditions (impaired mobility, cognitive dysfunction, affective disorders) not just once but longitudinally will be important. Communication will be key, particularly our ability to communicate uncertainty while still making it clear that the absence of data on what to do will never lead to abandonment. Finally, shared decision making—the cornerstone of which is effective communication between patients and providers—may greatly improve the multimorbid patient’s care.

Regardless of the optimal strategy for managing multimorbidity, it is clear that this ubiquitous condition cannot be overlooked. A central step toward bringing multimorbidity into focus will involve addressing it in all clinical practice guidelines, because the Achilles’ heel is of the disease-centered, guideline-based approach. Indeed, few current guidelines address multimorbidity (10), and there has been a failure to convert patient-centered clinical and research priorities into action and an avoidance of the inherent complexity of health care delivery. Further, novel assessments and shared decision-making tools, such as the brief semistructured clinical version of the Comprehensive Assessment and Referral Evaluation interview (11,12), may help address multimorbidity, because these tools may facilitate physician–patient communication and help identify patient-important priorities for care. We can no longer overlook the obvious: that outcomes of our most vulnerable patients with HF are driven as much by their extracardiac conditions as their cardiovascular ones, encouraging us not to forget that we need to treat to the “whole” patient.

REFERENCES


**KEY WORDS**

- geriatric cardiology
- multimorbidity
- multiple chronic conditions
- patient-centered care