Evaluating Dyspnea in Heart Failure Patients Takes an Open Mind
By Christine Kilgore

Dyspnea has a “very broad differential,” and even in patients with heart failure the symptom may have other cardiac and noncardiac causes, said geriatric cardiologist Nicole M. Orr, MD, FACC, during a session on heart failure and dyspnea at the Annual Conference of AMDA – The Society of Post-Acute and Long-Term Care Medicine.

Cardiac considerations for dyspnea in the skilled nursing patient with or without a diagnosis of heart failure include hypertension, ischemia, chronicotropic incompetence, and peripheral vascular disease. Noncardiac considerations include pulmonary disease and geriatric issues such as frailty, sarcopenia, and polypharmacy. And now COVID-19 is a confounder as well, said Dr. Orr, assistant professor of medicine at Tufts University Medical School and founder and president of Post-Acute Cardiology Care, LLC.

“We can’t just say that just because a patient has a history of heart failure, their shortness of breath is from heart failure,” Dr. Orr emphasized in an interview after the meeting, “You have to investigate every time with an open mind, a clean slate.”

In patients with a history of heart failure with preserved ejection fraction (HFrEF) or possible HFpEF, dyspnea may stem from comorbidity-driven chronic endothelial inflammation, for instance, or chronicotropic incompetence, the latter of which should prompt a reevaluation of beta-blocker use and dosing in patients taking these medications.

“There’s no evidence that HFpEF alone requires treatment with beta blockers,” Dr. Orr noted. “Often in frail patients with chronicotropic incompetence, beta blockers can do more harm than good.”

It’s also important with skilled nursing patients who have dyspnea and no or minimal congestion to ask “what’s happening in rehab?” she said. “As cardiologists in SNFs we can use a poor man’s version of the gold standard — exercise [and] right heart catheterization — and examine our patients [with diagnosed or suspected HFpEF] while they’re exercising in rehab.” The goal is to look at exertional symptoms, changes in jugular venous pressure, and hemodynamic changes, Dr. Orr explained. A recently validated tool — the H2FPEF score — uses echocardiography findings and clinical characteristics to estimate the likelihood of HFpEF in patients with unexplained exertional dyspnea (Circulation 2018;138:861–870), and it can be helpful in guiding further evaluation, she noted.

When dyspnea occurs in patients with signs of heart failure and clear volume overload, it is important to discern the etiology of decompensation, reduce congestion, and implement patient-centered guideline-driven medical therapy, up-titrating when possible.

Sacubitril/valsartan (Entresto), a combined neprilysin inhibitor and angiotensin receptor blocker, is an “exciting addition” to the treatment armamentarium for heart failure with reduced ejection fraction (HFrEF), Dr. Orr noted. It offered an additional 16% mortality reduction compared with standard angiotensin-converting-enzyme inhibitor therapy in the PARADIGM-HF trial, so “you’ll be seeing a lot more patients on [this medication],” she said. “Know that because there’s a diuretic effect, oftentimes during a SNF stay you’ll need to readjust or decrease [the patient’s] oral loop diuretic or other diuretic.”

Dyspnea also is a common symptom of long COVID-19, along with fatigue, chest pain, palpitations, and orthostasis. Dr. Orr said. “Oftentimes the dyspnea in post-COVID does not present in a silo, and neither do the patients with heart failure and COVID present in a silo of either their cardiovascular disease or their post-COVID cardiac disease,” she said. “It’s a mixture and hard to tease out.”

As more patients with heart failure continue to be hospitalized for COVID-19, “the landscape of our SNF heart failure patients will continue to evolve,” she said, noting that it’s not fully understood which heart failure patients develop long COVID-19.

Margaret Pisani, MD, MPH, associate professor of medicine (pulmonary) at Yale University School of Medicine, said during the session that post-COVID-19 unexplained dyspnea appears to span the spectrum of COVID-19 severity and is often not presenting along with interstitial lung disease or pulmonary fibrosis as was originally anticipated. “Oftentimes [pulmonary fraction tests] are normal, and there may be only minor radiographic changes,” she said. “We’re trying to think through all possible explanations for symptoms in these patients, including vocal cord dysfunction, either from being intubated or as a possible direct effect of the virus itself…cardiac dysfunction with myocarditis, coronary vasospasm, or postural orthostatic tachycardia syndrome.”

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In general, COVID-19 aside, older adults often blame dyspnea on normal aging, so they underestimate its importance and will not report it until it’s severe, Dr. Pisani cautioned. Asthma, chronic obstructive pulmonary disease (COPD)/emphysema, interstitial lung disease, and obstructive sleep apnea — in addition to heart failure — can all cause dyspnea. So can gastroesophageal reflux disease (GERD). “Always think about and assess for reflux,” Dr. Pisani advised. “Patients may be aspirating and may not have classic symptoms of GERD.”

There is also a complex interplay between COPD and heart failure, which needs to be considered as dyspnea is investigated, Dr. Pisani said. COPD is frequently underdiagnosed in patients with heart failure; conversely, the symptoms of dyspnea and peripheral edema may be misattributed to COPD in patients who have heart failure. “One of our clinical challenges is to differentiate whether it’s the COPD or the heart failure, or both, that’s causing the symptoms,” she said. Cough, wheezing, or change in sputum quantity or characteristics may point toward a pulmonary process, she noted, while new electrocardiogram changes may point toward a cardiac etiology. “Or in reality, it may be both,” Dr. Pisani said.

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