EDITOR'S MEMO

The Challenges of Pulmonary Hypertension in Left Heart Disease

Pulmonary hypertension (PH) is a relatively common complication of left heart disease and represents a challenging clinical situation for providers and patients alike. The aging demographic in the United States and widespread use of echocardiography in these patients often results in patients' being referred for a consult to evaluate the PH. The percentage of patients evaluated in PH centers is sizeable and seemingly increasing. Unfortunately, PH-specific treatment options are limited. The 5th World Symposium on Pulmonary Hypertension concluded that "there is no validated treatment" for PH due to left heart disease.[1] Indeed, there is an argument against use of pulmonary arterial hypertension medications outside clinical trials due to lack of proven efficacy and potential for harm.[2] Regardless, there is a critical need for PH experts to have a thorough understanding of the pathophysiology, clinical presentations, and most appropriate management recommendations. The current issue, guest edited by Dr. Teresa De Marco, offers a wonderful opportunity to review all of those issues in detail.

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References

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2. Wiener RS, Ouellette DR, Diamond E, et al. An official American Thoracic Society/American College of Chest Physicians policy statement: the Choosing Wisely top 5 list in adult pulmonary medicine. *Chest.* 2014;145:1383-1391.

GUEST EDITOR'S MEMO

Pulmonary hypertension (PH) is a common complication of left heart disease (LHD), often related to severity of the underlying condition. Pulmonary hypertension due to LHD (PH-LHD) is most common in patients with heart failure, with preserved (HFpEF) or reduced ejection fraction (HFrEF), and negatively impacts symptoms, exercise capacity, and outcome. PH-LHD has been recognized as a growing problem in terms of definition, classification, and differential diagnosis; but also for its influence on outcome and therapy. Indeed, distinguishing between pulmonary arterial hypertension (PAH) and HFpEF can be challenging. Compared with PAH, patients with PH due to HFpEF are more often older, female, and have a history of systemic hypertension, atrial fibrillation, and many of the features of the metabolic syndrome. The current hemodynamic definition of PH-LHD combines a mean pulmonary artery pressure ≥25 mm Hg, a pulmonary artery wedge pressure >15 mm Hg, with variable transpulmonary gradient, diastolic pulmonary gradient, and pulmonary vascular resistance depending on the presence of isolated post-capillary PH versus combined post- and pre-capillary PH. However, the hemodynamic definition and the associated terminology have clinical deficiencies and are explored in this issue. Efforts to refine the definition are required and are ongoing. Other than treating the underlying condition, management of PH in LHD remains an unmet medical need lacking an evidence-based approach and any specific approved therapy. The above-mentioned challenges afford an opportunity for a focused review of PH LHD. This issue of *Advances in Pulmonary Hypertension* begins with a comprehensive overview by Drs. Barnett and Selby; followed by a sophisticated discussion of the right ventricle in PH LHD by Drs. Tedford, Houston, Hsu and Tampakakis; a clinically applicable summary of HFpEF with PH by Drs. Cogswell and Thenappan; and ending with a detailed review of valvular heart disease–associated PH by Drs. Horn and Kaple. I congratulate the authors on an outstanding issue of *Advances in PH*.

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