

Risk Factors of Pulmonary Hypertension in Patients on Hemodialysis; Mitral Regurgitation is a Classic Cause of Secondary Pulmonary Hypertension [Letter]

Abdulrahman Naser 

Department of Cardiology, Kırklareli Training and Research Hospital, KIRKLARELİ, Türkiye

Correspondence: Abdulrahman Naser, Department of Cardiology, Kırklareli Training and Research Hospital, Yayla, 3. Çamlık Sk. 49/1, 39010 Merkez/ Kırklareli Merkez, Kırklareli, Türkiye, Tel +90 555 831-4466, Email abdulrahman_naser@hotmail.com

Dear editor

I read with great interest an article published in your journal entitled “Risk Factors of Pulmonary Hypertension in Patients on Hemodialysis: A Single Center Study”.¹ The researchers, have studied the prevalence, risk factors, association with inflammation/oxidative stress, and cardiac changes in HDhemodialysis (HD) patients. Researchers have tackled an important issue, a subject that is not much emphasized in the literature. However, an important detail caught my attention.

In the materials and methods section of the mentioned article, the authors stated that they excluded patients with secondary causes of PH, including valvular heart disease. However, in result section “table-3” they presented mitral regurgitation (MR) to be significantly higher in patients with pulmonary hypertension (PH). Furthermore, it was also stated that “PH was significantly associated with the presence of mitral regurgitation on echocardiography”. Therefore, there is inconsistency regarding MR in the context of hemodialysis-associated PH. Also, there is not enough information about the degree and type of MR.

Five types of PH have been defined in European Society of Cardiology (ESC) guidelines according to clinical classification.^{2,3} Group 2, pulmonary hypertension is associated with left heart disease (LHD). Arguably, PH-LHD is considered the most common form of PH, accounting for 65–80% of cases,^{2,3} and mitral regurgitation is a classic cause of LHD.^{2,3} However, group 5 PH consists of a complex group of disorders. In group 5 PH, the mechanistic cause may be unclear or often multifactorial and may be secondary to increased pre- and post-capillary pressure as well as direct effects of risk factors on the pulmonary vasculature.^{2,3}

PH is a major public health problem. Especially in cases where PH can be easily ignored, such as in chronic kidney disease/hemodialysis patients, clarifying PH is beneficial for individual and national health management. Due to the pathophysiological complexity and broad spectrum of symptoms and clinical classes of pulmonary hypertension, it is important to more carefully elaborate the risk factors and pathophysiological connections between types of PH.

In conclusion, mitral regurgitation is a classic cause of secondary pulmonary hypertension and should be considered as a confounder in predicting CKD/hemodialysis-related PH risk factors.

Disclosure

There is no conflict of interest regarding this letter to the editor.

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