Clinical Correlates of Pulmonary Artery Systolic Pressure

To the Editor:

In their study of echocardiographically normal subjects, Dr McQuillan et al demonstrated an independent association of age, male sex, and body mass index (BMI) with elevated pulmonary artery systolic pressures (PASPs).1

The authors suggested that the correlation between increased BMI and increased PSAP may be attributable to an increased cardiac output in obese individuals. However, there is at least one other possible explanation for the correlation between BMI and PSAP: Some obese individuals with elevated PSAPs may have obstructive sleep apnea (OSA).

There is some debate in the research literature as to whether or not OSA is a cause of pulmonary hypertension. Several studies argue against there being a causal relationship, the data indicating that pulmonary hypertension correlates better with daytime hypoxemia than with the severity of the OSA.2

Other studies suggest that the severity of the sleep apnea may not be the critical variable in the development of pulmonary hypertension, but that some individuals with OSA and pulmonary hypertension have heightened pulmonary artery pressor responses to hypoxia.3,4

Because obesity correlates with OSA, some obese patients with normal echocardiograms may have underlying cardiopulmonary pathology. Furthermore, because there may be a relationship among leg edema, pulmonary hypertension, obesity, and OSA,5 and because the presence of edema may be the reason for an echocardiography referral, OSA may explain the correlation between BMI and PASP in echocardiographically normal patients.

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