Pulmonary Hypertension Missdiagnosed in the Obese

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MONTREAL — Obese patients often have a constellation of physiological problems that together can lead to a mistaken diagnosis of pulmonary artery hypertension, according to researchers at Duke University Medical Center in Durham, N.C. The presence of presynaptic dysnaptic in these patients often leads to an echocardiogram and a finding of elevated right ventricular systolic pressure. "Often the pressure is just mildly elevated, and these patients don’t really have pulmonary arterial hypertension but are referred for evaluation anyway," Dr. Terry A. Fortin said at the annual meeting of the American College of Chest Physicians. "To assess diagnostic strategies for pulmonary arterial hypertension (PAH) in this often very symptomatic population, we undertook an analysis of data from patients who were enrolled in clinical trials of PAH therapies."

Dr. Fortin and her colleagues at Duke University retrospectively assessed consecutive cardiac catheterization data on patients referred for suspected PAH. "Suspected PAH was defined as mean pulmonary arterial pressure (mPAP) greater than 25 mm Hg, pulmonary capillary wedge pressure (PCWP) less than 15 mm Hg, and pulmonary vascular resistance (PVR) greater than 3 Wood units," Dr. Fortin said.

Of those 78 patients, 40 had baseline syndromes or conditions that the investigators believed adequately explained the patients’ PH after work up. Those conditions included connective tissue disease, congenital heart disease, chronic thromboembolic disease, portopulmonary disease, severe lung disease, high-output arteriovenous shunts, and nontabulated disease.

Eliminating these patients left 38 patients with elevated mPAP associated with a constellation of factors that together resulted in PH, as expected. None of these patients showed evidence of PAH. Dr. Fortin said that only women with mild pulmonary hypertension (PH) with mPAP greater than 25 mm Hg and PVR less than 3 Wood units, said Dr. Fortin of Duke University Medical Center.

The study’s researchers concluded that a number of factors can contribute to a misdiagnosed patient of PH, including systemic hypertension, obesity, sleep-disordered breathing and hyperventilation, and elevated pulmonary capillary wedge pressure. "It should not be assumed that patients with an elevated right ventricular systolic pressure by echo have pulmonary arterial hypertension," Dr. Fortin cautioned. "Pulmonary capillary wedge pressure and diastolic dysfunction may be causative."