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Images in Cardiology: Isolated Pulmonary Arterial Pulsus Alternans Secondary to Pulmonary Hypertension

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FIG. 1 Transthoracic echocardiogram demonstrating marked enlargement of the right ventricular (RV) cavity, ventricular septum (VS) flattening, and a "D"-shaped left ventricle (LV).

A 32-year-old female with an undifferentiated connective tissue disease and progressive dyspnea underwent echocardiography (Fig. 1), followed by right heart catheterization (Fig. 2).

FIG. 2 Pulmonary arterial (PA) pressure tracing demonstrating pulmonary hypertension with pulmonary artery pulsus alternans.

Pulsus alternans, described by Traube in 1872, is a regular alternation in pulse pressure amplitude. This pattern may occur independently or simultaneously in the systemic and pulmonary circulations. Although seldom described, pulmonary artery pulsus alternans is not uncommon. Clinical significance, apart from the degree of right heart failure, is uncertain.