A 74-year-old man with basal cell carcinoma of the nose was referred for a preoperative echocardiogram. He had a history of chronic obstructive pulmonary disease (emphysema) and was receiving home oxygen therapy. The patient presented the typical physical findings of this disease. Auscultation disclosed a left parasternal systolic and diastolic murmur.

Transthoracic echocardiography showed a hypertrophied left ventricle with preserved contractility and right chamber findings suggestive of chronic cor pulmonale. The transverse parasternal axis in the plane of the large vessels (Figure 1) revealed severe postvalvular dilation of the main pulmonary artery and its branches (measurements are shown in the upper left corner), and free pulmonary valve regurgitation due to loss of central coaptation, with holodiastolic reversal of pulmonary artery flow (color M-mode in the upper right). Mean estimated pulmonary pressure was 75 mm Hg.

The x-rays taken over the last 10 years showed images of panacinar bullous emphysema, progressive enlargement of both hili and formation of a mass consistent with a pulmonary artery aneurysm (Figure 2). Magnetic resonance imaging confirmed the presence of a large pulmonary artery aneurysm (Figure 3) and allowed calculation of the maximum diameter, which was found to be 95 mm (red arrow); the right and left branches measured 40 mm and 38 mm, respectively (green arrows).

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