

Optical coherence tomography on the right side: pulmonary vascular disease in mitral stenosis

A 59-year-old woman presented with a 6-month history of worsening fatigue and exertional dyspnoea. On physical examination, she had a mitral stenosis murmur, a loud P2, an irregular pulse and mild peripheral oedema. The electrocardiogram showed atrial fibrillation and the echocardiogram was notable for a fibro-calcified mitral valve, with severe restriction of leaflet mobility and an area of 1 cm². Biventricular function was normal. As the valve anatomy was considered suitable for percutaneous intervention, the patient was scheduled for a balloon valvuloplasty. The preintervention cardiac catheterisation showed a pulmonary artery pressure of 41/20/30 mm Hg. After successful mitral dilatation, optical coherence tomography (OCT) (LightLab Imaging Inc, Westford, Massachusetts, USA) was performed on the distal pulmonary artery (figure 1). It showed thickened vessel wall either in small vessels (<1 mm) (figure 2A) or larger vessels (diameter ca. 2 mm) (figure 2B). OCT is a potentially useful tool for unravelling the mechanisms of group 2 pulmonary hypertension.¹

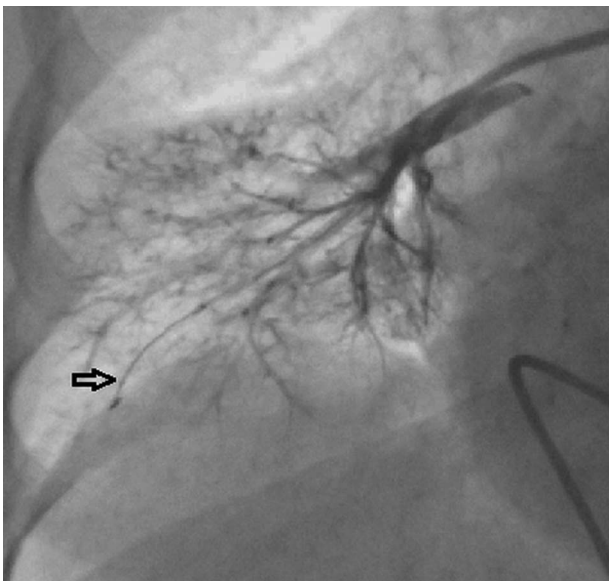


Figure 1 Pulmonary angiogram showing the location of the optical coherence tomography probe on the right distal pulmonary artery. A Judkins right guiding catheter was used (Launcher, Medtronic, Minnesota, USA) for advancing the probe and contrast as flushing solution.

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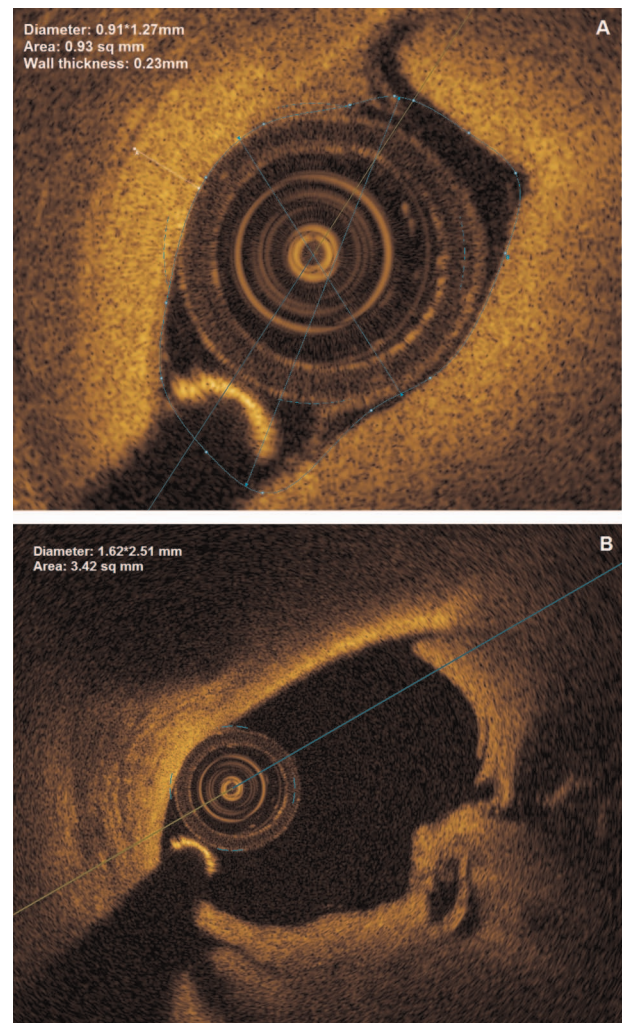


Figure 2 (A) At the level of the distal pulmonary artery (<1 mm² area), the vessel wall is markedly thickened (0.23 mm). (B) In this 2-mm wide distal pulmonary artery, the walls are also markedly thickened.

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