Three-dimensional-optical coherence tomography imaging of chronic thromboembolic pulmonary hypertension

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Chronic thromboembolic pulmonary hypertension (CTEPH) is caused by unresolved thromboemboli in the pulmonary arteries (PAs). We have previously demonstrated the usefulness of optical coherence tomography (OCT) to diagnose CTEPH. A 56-year-old Japanese woman was diagnosed as CTEPH with PA thrombus detected by computed tomography and pre-capillary pulmonary hypertension (mean PA pressure 46 mmHg, pulmonary artery wedge pressure 13 mmHg) by right heart catheterization. In this patient, we performed three-dimensional (3D)-OCT imaging in order to observe the unresolved PA thromboemboli, which clearly showed flaps and meshwork (Panel A; Supplementary material online Video S1), indicating the usefulness of 3D-OCT for the diagnosis of CTEPH.

Three-dimensional-OCT imaging showed flaps and meshwork of the PAs in a patient with CTEPH.

Supplementary material is available at European Heart Journal online.