Abnormal left atrial membranous structure in transthoracic echocardiography caused by external compression from a large bronchogenic cyst

A 44 year old woman was referred for echocardiographic examination because of recent onset of dyspnoea. She had been diagnosed with bronchial asthma by a private clinic. On physical examination, however, pulmonary auscultation revealed bilateral vesicular breath sounds without rales and good heart sounds without murmur. Transthoracic echocardiography demonstrated a thin walled membranous structure dividing the left atrium. Both sides had the same echo density, indicating fluid density. Several possible diagnoses were initially possible, such as cor triatriatum, left atrial dissection, or an external mass. Colour Doppler investigation showed no communication between the sides of the abnormal membrane. Contrast echo using perfluorocarbon-exposed sonicated dextrose albumin showed no filling of contrast into the upper side of the membrane (panel A). There was no evidence of pulmonary arterial hypertension. Subsequent transoesophageal echocardiography (TOE) revealed a non-movable membranous flap in the upper portion of the left atrium. The TOE also indicated there was no flow communication across the flap. Cardiac magnetic resonance imaging showed a round contoured extracardiac mass about 5.5 cm in diameter that originated from the subcarina and compressed against the left atrium. The mass had a uniformly low signal on T1 weighted image and a high signal on T2 weighted image without contrast enhancement (panel B). The mass was completely resected without complication and pathology confirmed it to be a bronchogenic cyst. The patient remains asymptomatic and there is no evidence of recurrence six months after surgery.