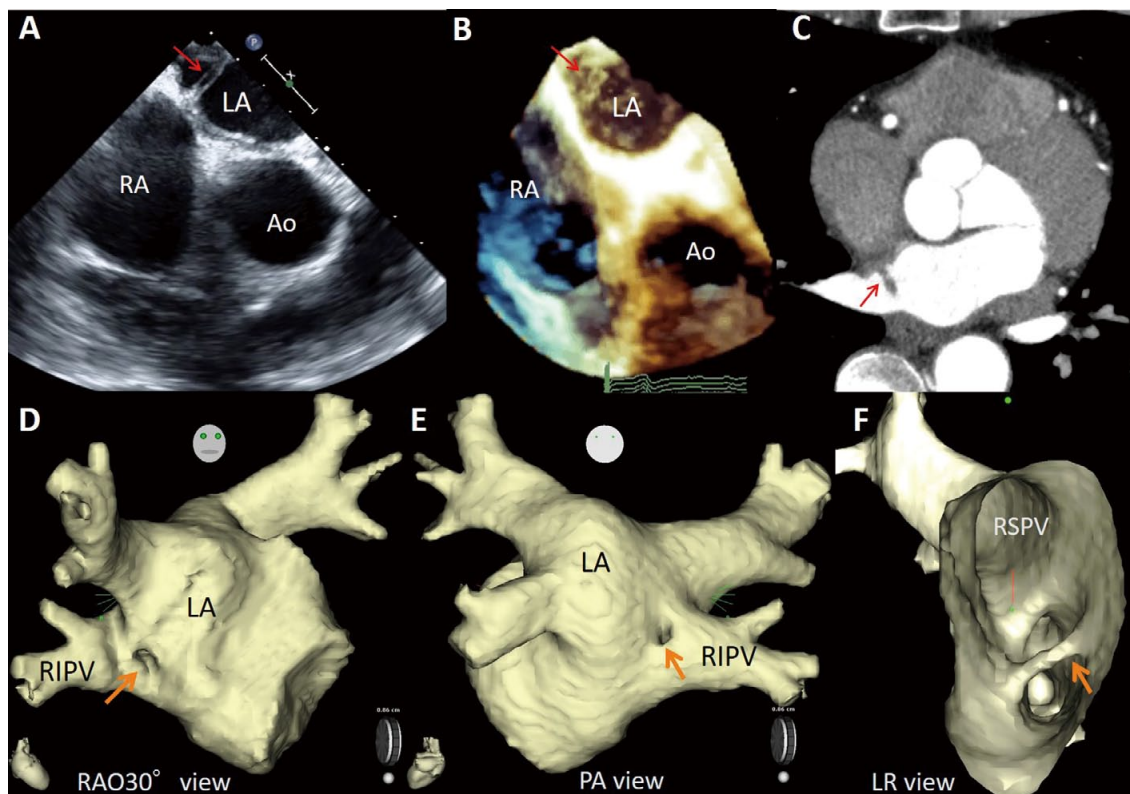


## String-Like Structure in the Left Atrium

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**Figure.** Two- (A) and 3-dimensional (B) transesophageal echocardiography, contrast-enhanced computed tomography (CT) scans (C) and left atrial (LA) reconstruction anatomy of CT images (D–F) revealed a string-like structure (arrows) extending from the posterior to the anterior side of the right inferior pulmonary vein (RIPV), across the front of the RIPV attached to the interatrial septum. Ao, aorta; LA, left atrium; RA, right atrium; RSPV, right superior pulmonary vein.

**A** 62-year-old man experienced sudden onset of tachycardia during triathlon training. During a treadmill exercise test, atrial fibrillation (AF) started when the heart rate was approximately 140 beats/min. Due to symptomatic paroxysmal AF, the patient was admitted

to our hospital for catheter ablation. Transthoracic echocardiography revealed no structural heart disease. Two- (Figure A) and 3-dimensional (Figure B) transesophageal echocardiography (TEE), contrast-enhanced computed tomography (CT) scans (Figure C) and left atrial (LA)

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reconstruction anatomy of CT images (Figure D–F) revealed a string-like structure extending from the posterior to the anterior side of the right inferior pulmonary vein (RIPV), across the front of the RIPV attached to the interatrial septum, which consequently interfered with right pulmonary vein (PV) isolation.

An anomalous muscular band in the LA has been found in approximately 2% of autopsy cases<sup>1</sup> and in 0.1% of CT studies.<sup>2</sup> In such cases, it may be possible to accomplish PV isolation by either ostial or wide-area ablation. Radiofrequency energy ablation close to the PV orifices and/or within the PVs could result in PV stenosis. Trans-septal LA catheterization into the posterior part of this string-like structure may enable successful PV isolation. Cardiac CT and TEE provide accurate imaging of the PV and LA anatomy.<sup>3</sup> This information is important for determining procedural strategies.

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#### IRB Information

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